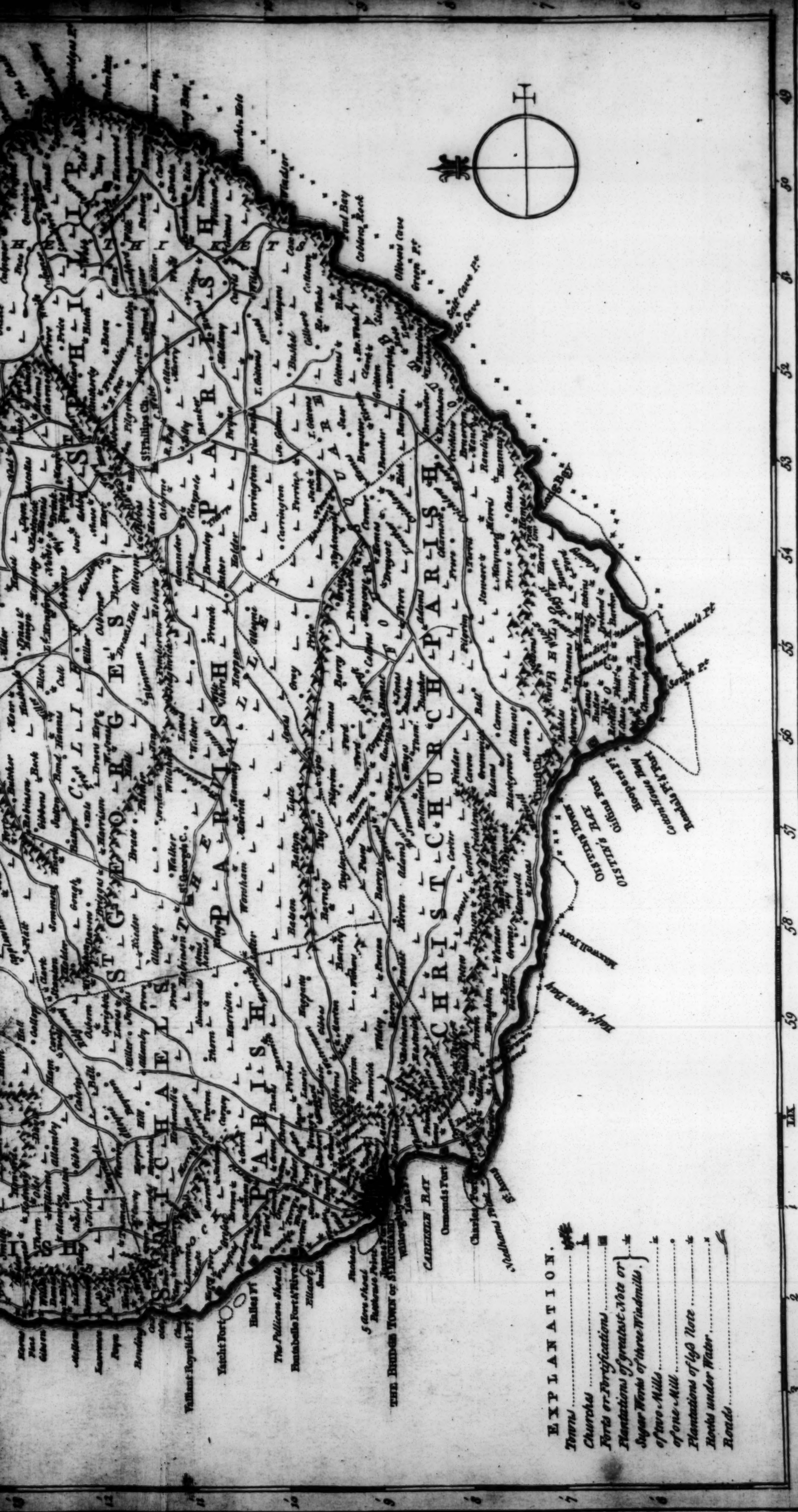


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A MAP OF
the ISLAND of
BARBADOS,
Drawn from an Actual Survey,
and from the Observations of
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BY Tho^s. Jefferys, GEOGRAPHER
to His Royal Highness the
Prince of Wales.
To His Excellency
Henry Grenville Esq^r
Governor of Barbadoes
His Majesty's Hon^{ble} Members of the Council
The Hon^{ble} William Gibbons Esq^r Speaker,
and to the rest of the
Worthy Members of the Assembly.
This Plate is humbly Inscribed
&c.

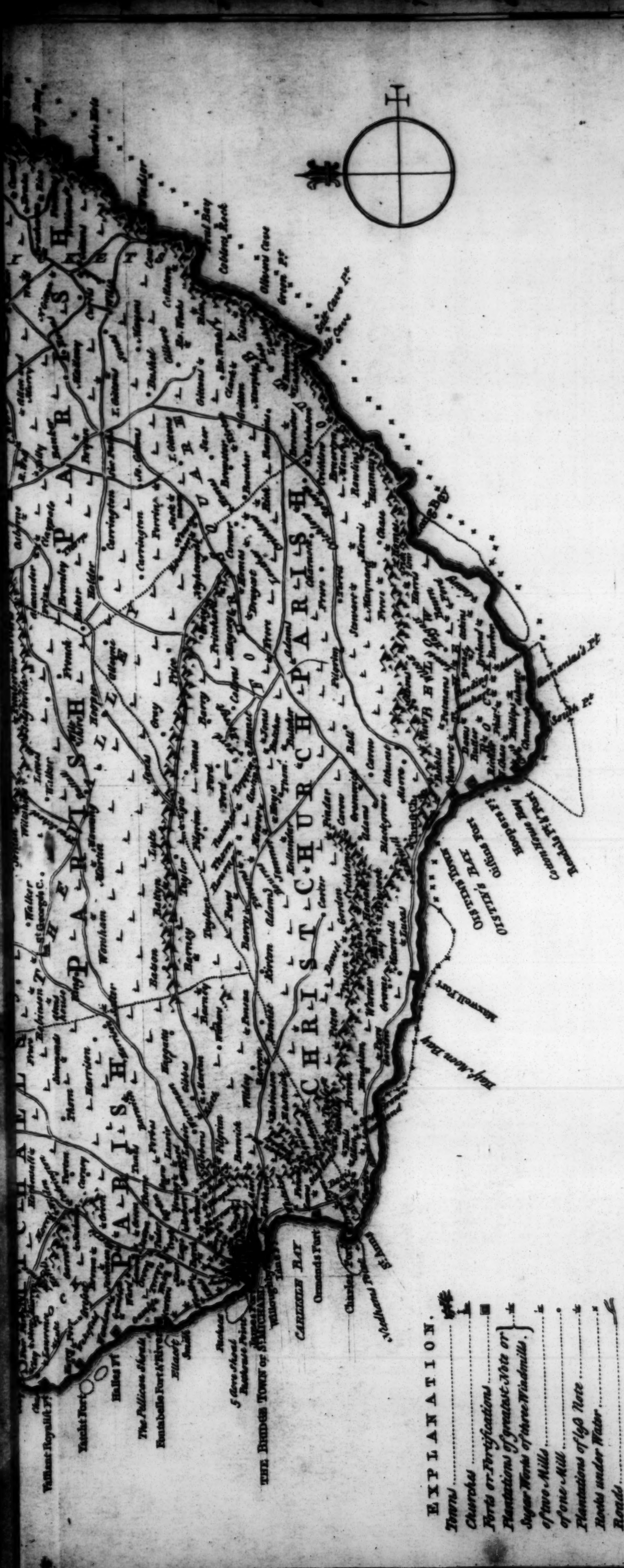




EXPLANATION.

- Towns.....
- Churches.....
- Ports or Fortifications.....
- Plantations of great Note or Sugar Works of three Windmills.....
- of two Mills.....
- of one Mill.....
- Plantations of less Note.....
- Rocks under Water.....
- Roads.....

49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



Town	
Churches	
Forts or Fortifications	
Plantations of Great Salt Water	}
Sugar Works of three Windmills.	
of two Mills	
of one Mill	
Plantations of less Note	
Rocks under Water	
Roads	

Towns.....	•
Churches.....	✠
Forts or Fortifications.....	■
Plantations of Great Salt Water } Sugar Works of Three Windmills. }	⌋
of Two Mills.....	•
of One Mill.....	•
Plantations of Less Note.....	✧
Roads under Water.....	≡
Roads.....	—

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18 K 6

THE
NATURAL HISTORY
OF
BARBADOS.

IN TEN BOOKS.

By the REVEREND

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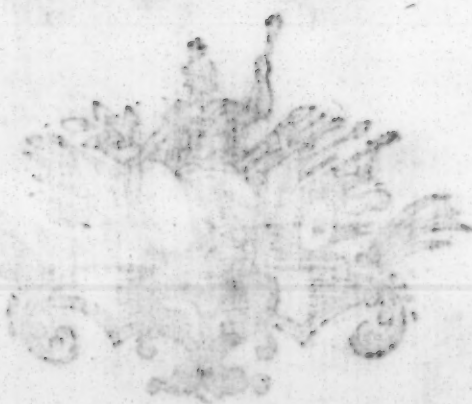
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WITH THE GREATEST DUTY AND RESPECT,
INSCRIBED, BY

HIS GRACE'S MOST OBEDIENT
AND HUMBLE SERVANT,

G. Hughes.

TO

THE

T H C M A S

BY

THE

THE

THE

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E R R A T A.

Page 1. l. 12. for greatest Breadth 13. 3-qrs read 14 and 5 Furlongs. Page 52. for Swallows read Sallows. Ibid. line 7. for Yeagh read Yew. Page 136. dele the Description of Turk's Head. Page 139. line 18. for expands itself horizontally read expanding itself horizontally. Page 146. for Bee-wood Tree read Beef-wood Tree. Ibid. dele Fuffic Tree. Page 164. for Buombo read Bumbo. Page 170. line 21. for reddish, thick and succulent. Page 180. line 12. dele red before Veins. Page 182. line 22. for sort read species. Page 186. dele Cochineal. Page 208. line 20. for brownish read brown. Page 209. line 11. for brownish read brown. 210 line 8. for high read long. Ibid. l. 33. for high read in height. Ibid. line 36. for brownish read brown. Page 216. line 9. for roundish Pods read round Pods. Ibid. line 10. for thoug h somewhat read though somewhat. Ibid. line 18. after that Time add from their being planted. Page 220. for Antegoa read Antegua. Page 221. dele Wild Penny-royal. Ibid. line 15. dele the after by. Ibid. line 20. dele and roundish. Page 222. line 11. for are longish read are about five Inches long, narrow and sharp pointed. Ibid. line 23. after Colt's Foot add and the Colour. Page 223. line 23. after leaves add somewhat similar. Ibid. lines 33 and 34. for three Inches thick read two Inches thick near the Earth. Page 224. line 8. for Abundance read a great Number. Page 226. line 16. for many leaved Flowers read rosaceous Flowers. Page 236. line 33. for Stalk read main Stalk. Page 237. line 8. for Skill read Knowledge. Page 253. line 15. for coral Sea-weed read the stiff Sea-weed. Ibid. line 20 dele Head after Brown. Ibid. instead of rather Seed, read what are here called Seed. Page 255. for purplish Sea Moss, read purple Sea Moss. Ibid. line 30. for purplish Colour read purple. Page 258. line 3. after Resemblance to it add in Shape. Page 261. line 15. after reality add of. Page 262. line 3. for it often read it some Times. Ibid. line 14. for about the Roots of the great Feelers read where the Feelers take their Rise. Ibid. line 3. after Sea add this. Ibid. after Shoals add or such shallow Places. Ibid. line 28. for which they cast, read which they do. Page 266. line 8. for but oftener read and often Graneries near the Sea-side. Ibid. line 4. for twenty Pounds read ten Pounds. Page 268. line 19. for Fanciffulness read Fancy. Page 273. for Vergil, read Virgil; for creditable, read credible. Page 227. line 22. for brownish read brown. Page 278. line 5. for blackish read black Spots. Ibid. line 11. for Concha Veneris Alba read the Rice Shell. Page 280. line 32. dele by which I suppose Nourishment is convey'd to the Fish. Page 297. line 39. for languid read languid. Page 298 Plate 24 should be marked Plate 26. Negroes, their Numbers, Index for Page 2. read Page 14. For Plate 11. 352. read Plate 11. 152.

ADDENDA The Wild CANE.

THIS grows to about fifteen Feet high. Its Flags resemble to those of the Reeds in England, and the Body is generally thicker than a Walking-cane, and strong; the young Canes at about two or three Inches growth are made into Pickles. Plate 10 *. being the Description of the Bay Berry Tree, is to be placed opposite to Page 145.

ROSE-SHELLS.

THESE are of two Sorts, the white, and those tinged with a Maiden's-blush; the latter are very rare to be met with, but the former are in great Plenty on most of our sandy Bays.

These, with a Species of the small black Buccinum Kind, and another Species of very small Shells of a pale green, and often called Pea-shells, are with great Assiduity, gathered and sent to England: With the first Kind the Ladies form a lively Representation of Roses; the second serve to imitate the Seed and Seed-vessels in supposed full-blown Sun-flowers, and the third are of no less Service to represent those small Granulations common to the thrummy Discus of some, as well as the Summits of other apetalous Flowers.

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Treats of the Cause, Nature, and Cure of the Diseases peculiar to that, and the neighbouring *West-India* Islands. The Qualities of the Waters, whether of Springs, Rivers, Wells or Ponds. Fossils, and subterraneous Caves. The unequal Force of the De-luge near the Equator, and in variable Climates, prov'd, and accounted for. The Nature of bituminous Fossils examined, with a Confutation, from their Qualities and Situation of a late great Critic's Hypothesis; viz. 'That the Destruction of *Sodom* and *Gomorrab* was not supernatural, but occasion'd in a natural Way by several Veins of Bitumen taking Fire.'

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BOOK IV. Page 97.

Treats of Vegetables; and begins with a Botanical Description, as well as a Physical Inquiry into the Nature and Qualities of Trees, Shrubs, and Plants, hitherto known in the Island, being about Four hundred in Number; and concludes with those of the Nuciferous Kind.

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Treats of the Sea-Fishes, and several marine Productions; especially such as have not been at all, or imperfectly, described by other Authors: With a probable Account of the different Sea-Currents round this, and the neighbouring Islands.

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P R E F A C E.



NATURAL Philosophy flourished first in the East. It was in great Perfection among the *Assyrians*, *Chaldeans*, and *Egyptians*; and, if their Knowledge of it had been faithfully conveyed to Posterity, we might have expected, that the next Age of Learning in *Greece* would have been able to have made greater Progress in that noble Science.

* “ But, alas! here Philosophy was forced to put
“ on a poetical Dress, adorned by the Poets, its
“ Patrons, with Fables, and enlivened with extravagant Fancies. Nor
“ was *Athens* itself proof against so prevailing a Corruption.”

This was the State of every Branch of Philosophy in *Greece*; nor did this Study meet with much better Success in the first Part of the succeeding *Roman* Empire. “ For while this was in its Infancy, during the Three
“ first Ages, which were spent in conquering *Italy*; Strictness of Man-
“ ners, and the Art of War, were their chief Study, and continued to be
“ so, till they were Masters of the East.” Then Oratory became their Darling. Upon the Declension of the *Roman* Empire, the Darkness of Ignorance, that ensued thro’ many successive Ages, spread like *Elijah’s* Cloud, and, in a Darkness, like that of *Egypt*, enveloped the small Remains of Learning in almost a total Eclipse.

Nor did the Philosophical Part of it revive, or shew the least Spark of its native Brightness, till *Galileo* in *Italy*, and the great *Bacon* in *England*, became its Patrons.

A

It

* *Sprat’s History of the Royal Society.*

It was about this Time that Natural History, as well as every Branch of Experimental Philosophy, became the Study of great Men in different Countries, in *England* especially, and some time afterwards in *France*, under the Protection of that great Patron of Literature, *Lewis* the XIVth, whose Princely Favours sought for, and encouraged, Men of Learning, not in *France* only, but in the most distant Countries.

“ But of late Years its greatest Promoters have been the Royal Society in *England*, and the Academy of Sciences in *France* : By their means chiefly, has the World received more useful Discoveries and Improvements in one Century, than it had done for many Ages before.”

“ If they go on with the same unwearied Diligence and Success for one Century more, what Depths of Nature will not be explored ? What Treasures of Knowledge will not be displayed ?”

But tho’ many Branches of this excellent Study have, of late Years, been so laudably cultivated, to the Glory of God, and the Good of Mankind ; yet we have Cause to lament, that our Pursuits of this Nature are still deficient.

The several ingenious and learned Discoveries of *Malpighi*, *Grew*, *Ray*, *Derham*, and *Hales* (among many others that might be added), tho’ excellent in their Kind, are yet but so many well-proportioned Limbs of an unfinished Piece.

Other Sciences and Arts owe their Perfection, not only to the Capacity of the great Men who studied them, but likewise to the confined Nature of the Subjects treated of.

But as to Natural History, so many are the Species of Animals, Plants, and Fossils, which are yearly discovered, that we may justly say with *Pliny*, *Multum adhuc restat operis, multumq; restabit ; nec ulli nato post mille sæcula præcluditur occasio aliquid adjiciendi*. And tho’ the Study of so extensive a Subject be attended with some Difficulty, yet will it prove no less pleasing than useful.

In other Histories we meet with, at least, a great Mixture of Pain with our Pleasure. If in Biography we are first charmed with the great Talents and amiable Character of *Cæsar*, whilst in the true Interest of his Country ; shall we not be grieved to find, that his Ambition, at last, proved fatal to many Thousands of his Fellow-Citizens and Countrymen ? If we are pleased with the Life and Actions of *Epaminondas* ; as the fatal Catastrophe of his last unhappy Period draws on, can any Degree of Chearfulness check the rising Sigh, or stop the falling Tear ?

When from Biography we pursue Mankind through the general History of Nations, we shall be shocked with monstrous Examples of Wickedness, far overbalancing the few successful Instances of disinterested Virtue. In

In one Age we see *Epictetus* banished, and the venerable *Seneca* doomed to Death, whilst *Domitian* and *Nero* are covered with Purple. In another Period, injured Majesty bows the Neck to relentless Tyranny.

If, from this unamiable Stream of historic Truth, we explore its branching Rivulets, and seek for Pleasure in our Researches into the Antiquity of Nations; this Study, tho' always harmless, and sometimes useful; yet, after an irksome and tedious Pursuit, thro' Paths rendered obscure and dark by Length of Time, or Ignorance, or made almost impervious by Superstition, after a Life spent in such Inquiries, perhaps the ultimate Result will be, how precisely to determine the Day and Year, that memorable *Æra*, which gave Birth to a *Nimrod*, who conquered some small Province, or built some little City, and reigned its Tyrant; or perhaps the Period of our Labours will close with the diminutive Discovery how to fix the original Meaning of some obscure Sentence, or even an obsolete Word.

Whereas, in pursuing the Study of Nature, and meditating upon the exact Harmony so visible in the Works of the Creation, we are sure to meet with untainted Pleasures; not such as proceed from the Transports of an heated Imagination, or a violent Passion, but Pleasures, like that of Health, still and serene.

The Accomplishments we acquire by many other Studies, may, by soothing our Vanity, occasionally mislead us, and likewise by ass human Nature with a strong Propensity towards some favourite Prepossession of the Will.

Thus the Oratory of *Cicero*, indued with every Power to please ---- to raise or calm the various Passions in the human Breast; ---- (a noble Endowment, when employed in the Cause of Virtue!) ---- But (such, alas! is the Instability and Imperfection of human Nature) this very Talent, which gave him Pre-eminence above other Men, became subservient to indulge a Weakness, which we must at once condemn and pity. To living *Cæsar*, the Orator paid the pleasing Tribute of Adulation and Praise: ---But, when dead, loaded him with Reproaches.

If we descend to many other Branches of Study, and polite Literature (especially in the present Age), we shall find, that these Embellishments too often tend only to inspire us with a fancied Superiority over others, and serve, at best, but to set forth and enliven some particular Occasion or Period of Life. Their Amusements, to make use of a great Writer's Simile, “* are like a Fountain, which, on some gaudy Days, spouts forth a “frothy Stream, but remains dry all the rest of the Year.”

But such are the Subjects of our Inquiries in Natural Philosophy, that they are as large, and as lasting, as the Universe, full of inexhaustible Variety,

* Lord Viscount *Bolingbroke*.

Variety, worthy (next the sacred Oracles) of the Attention of him, whom God hath placed at the Head of this lower World.

By contemplating these Subjects, we are gradually led from Things visible, to the Knowledge of him who is invisible. Here we see innumerable Instances of Harmony, Beauty, and Order, not to be imitated by the most laborious Endeavours of any human Art or Contrivance.

Those delighted with the Vegetable Creation may, each returning Spring, not only be pleased with their Profusion of Sweets, and of such beautiful Colours, as excel even a *Solomon* in all his Glory; but likewise our Inquiries may now be as boundless as the Creation; no forbidden Tree checks our Curiosity; but, with *Solomon*, we may explore their Secrets, from the lofty Cedar to the humble Hyssop, springing from the Wall.

When by these, and such-like Inquiries, we find in every thing a wise, good, and useful Design, it will afford us Pleasures, purer and superior to those which the sanguine Glory of Arms, boundless Ambition, or satiated Avarice, can give. It will inspire us with Sentiments most pleasing, as most suitable, to that divine Image the Almighty has pleased to stamp of himself upon the human Mind.

“ * What room can there be for low little Things in Minds so usefully and so nobly employed? What dark and melancholy Passions can overshadow his Heart, whose Senses are constantly entertained with so many various Productions? ” The least good Effect attending these Pursuits will be an innocent Joy.

“ What Anger, Envy, Hatred, or Revenge, can long torment his Breast, whom not only the noblest Objects, but even every Insect, every Blade of Grass, or Grain of Sand, can divert? ” To whom the Return of every Season suggests a Circle of the most innocent Amusements.

From these Inquiries, he will learn the infinite Distance between his great Creator and himself. “ This will teach him to worship that Wisdom by which all Things are so easily sustained, and will lead him to direct his Praises aright. ”

There is not the smallest Part of this Globe left without evident Signatures of God's Goodness. If this little Spot we are treating of, produces not the Sapphire, the Carbuncle, Topaz, or Ruby, we are not wanting, however, in the more truly valuable Productions of Nature, which are chiefly subservient to the Necessities and Conveniencies of Life; and even our most barren Hills are not unserviceable: If their high Summits want their grateful Verdure; if out of their Sides we cannot dig Brass; yet it is to these, under Providence, we owe the former and the

P R E F A C E

v

the latter Rain, by intercepting several Clouds, and watry Vapours, that would otherwise fly over us.

It is from the Sides of these Hills and Mountains that the living Streams descend, so grateful and refreshing to Men and Beasts in hot Climates. It is likewise to their friendly Shades, that we owe the Growth of several valuable Plants, whose delicate Texture could not bear the long-continued piercing Rays of the Sun.

But, among other providential Blessings, the Constancy of the Trade-Winds is not the least valuable: Without this, all other Conveniencies, such as Pleasantness of Situation, Richness of Soil, and seasonable Weather, would be of no Service; since the Return of each Day, now, by the Breezes of this Wind, made cool and grateful, would, without this providential Allotment, be insufferable through Heat: The tender Plant would lose its grateful Verdure, fade, wither, and die.

It may perhaps be said by some Readers, that these, and such Reflections, are too often interspersed through the following Work; and that it would be sufficient barely to treat of the Nature and Qualities of the Subjects in a Philosophical Light, without drawing any Conclusions from them, though they evidently point out the Wisdom, Power, and Goodness of God, in the Make, Nature, and Use of each Individual.

The Answer to such is easy: That the original and true Use of Philosophy was to render Mankind good as well as learned; by raising their Thoughts from Things visible, to the invisible Author of all Perfection.

Shall *Galen*, a Heathen Philosopher, break out into Raptures of Admiration, upon the Discovery of so many Marks of infinite Wisdom in the Formation of the Eye? And, shall Christians be blamed for taking notice of such Instances of God's Wisdom in other Parts of the Creation?

Philosophy, when rightly applied, is of great Use, even in a religious View: It was this that taught *Pythagoras* Integrity of Manners, and Austerity of Life.

This made *Empedocles* prefer a quiet private Life to the Splendor of a Crown, with all its lucrative Advantages.

This taught *Socrates* to die as free from Haughtiness as Weakness; "and the most beautiful Lineaments, in the Character of *Cato*, are owing to this excellent Science."

Here the great *Bacon* experienced more exalted Pleasures than in the Sunshine of a Court. It was this that not only corrected the past Inadvertencies of his Life, unto which an infatuated Attachment to Grandeur had misled him, but likewise recalled his great Talents from meaner Pursuits to their proper Objects—To explore the hidden Secrets of Nature: And, by making Experience and Reason go hand in hand, he not only
a
exploded

exploded those groundless dogmatical Opinions, which Length of Time had rendered venerable to Ages of Ignorance; but likewise, by numberless Experiments, both sought and discovered several valuable Truths; which, like rich Ore, had been long hid under Rubbish.

Future Discoveries will, no doubt, in so inquisitive an Age as this, bring likewise to Light many Secrets of Nature, which even till he hid in Obscurity: But, in order to be successful in such Attempts; as the Harvest is large, and the Labourers few, every Assistance ought to be embraced, even from Men of no extraordinary Talents: These, like Hewers of Wood, and Drawers of Water, may be serviceable. It may be, perhaps, necessary to premise, that we are not to expect the most exact Performance of this Kind to be in every Part equally engaging. The historical Description of a Country, like its natural Appearance, must needs be attended with Variety. And as, in travelling over it, we must climb high rocky Hills, and pass through dreary Defarts, as well as open Lawns, and flowery Meads; so the Reader must not always expect to be entertained with beautiful Images, and a Loftiness of Style. In Variety of Subjects, this must alter with the Nature of the Things to be described.

For Instance: A pompous Stile and Language would ill fit a bare Narration of Facts, or the Description of a grovelling Plant. Upon the Whole, that Stile or Method of Writing (as a great Orator hath observed) is best, which represents the Subject in Words most expressive of their Nature and Qualities.

As I have been obliged, in the Course of the following Treatise, to differ in Opinion from several Authors, I have endeavoured to do it without superciliously condemning them, or, I hope, even lessening that Benevolence which we owe to one another; and which is the surest Foundation of social Happiness.

The Mistakes of many Authors, who have treated of Places not perfectly known to them, are almost unavoidable, and will be always so, whilst they receive their Informations from Men, who have neither a Capacity to discern, Judgment to represent Things in their proper Light; nor are ingenuous enough to relate nothing but Truth.

The Mistakes, therefore, of such Authors, are by no means the Object of Ridicule: Justice, Good-nature, and Candour, ought to be always inseparable from human Kind; especially when we presume to sit as Judges upon other Mens Works; lest we should rashly pronounce that a Crime, which, at most, was but the Effect of too great a Share of Credulity: A Misfortune, which Men of the greatest Veracity themselves have been often led into.

Thus, And by making Experience and Reason go hand in hand, he not only had misled him, but likewise recalled his great Talents from meaner Pursuits to their proper Objects---To explore the hidden Secrets of Nature: exploded

Thus the great *Boerhaave*, depending upon the Information of others; hath been induced to believe the *Barbados* Green Tar (an evident bituminous Fossil) to be an Exsudation from a Vegetable.

No Faults, therefore, of this Kind, are, justly speaking, proper Objects of Censure, but those which Men wilfully commit, and, by pretended useful Discoveries, impose upon the Public: These, like false Lights, or erroneous Land-marks, are of an heinous Nature; rise into Crimes; and become gradually of a deeper Dye, as their Impositions upon Mankind are more or less of ill Consequence.

Nor are those Men excusable, who (tho' in Things indifferent) love to dwell upon the Marvelous; and either surprisngly aggrandize or diminish the Subjects they treat of, just as it best suits with their Fancy. Here the Vanity of being thought superior to those who went before them, as well as more learned than their Neighbours, hath a great Share. But the short-lived Portion of all such, is a flashy temporary Glare of Applause; which, like Lightning, whilst it shines, destroys. In pursuing Fame, they fly from Veracity, its best and surest Pillar; and, without which, no Character can be truly valuable.

How far I have myself observed these Rules, and avoided these Faults, must be left to the Public to determine; as well as with what Success I have, upon the Whole, through untrodden Paths, pursued my Subject. And, as this, in its different Branches, required Variety of Reading, as well as Talents peculiarly adapted to each, the learned and candid Reader will look upon any little Inaccuracy as almost unavoidable, and therefore excusable.

This I can with Truth say, that I have not represented one single Fact, which I did not either see myself, or had from Persons of known Veracity. And, as to the Arguments offered to support any speculative Part of the Work, these must stand or fall by their own intrinsic Worth.



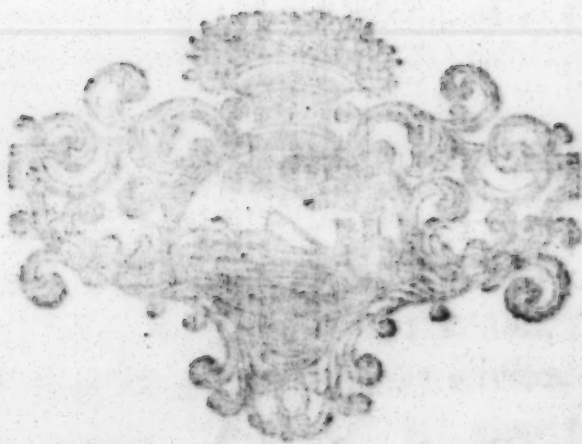
Thus the great Botanical, depending upon the information of others, hath been induced to believe the Barbados Green Tree (an evident poisonous Fossil) to be an Exhalation from a Vegetable.

No Faults therefore of this Kind, are justly speaking, proper Objects of Contention, but those which have been actually committed, and by no means slight Discoveries, impole upon the Public: These the Author, in his Lights, of curious and marks, are of an honest Nature; the more Games, and become gradually of a deeper Dye, as their Inscriptions upon Marking are more or less of its Consequences.

Not are those Men extremely, who (the) in Things, which are to dwell upon the Minutes, and other things, which are to be done, with the Subjects they are to be done, and which are to be done, as the Variety of being, which are to be done, and which are to be done, as well as more learned than those, which are to be done, and which are to be done, as those lived Portion of the

E R R A T A.

PAGE 6. Line 1. for inhabited read inhabited. In Note (8) for bigu r. high. p. 36. l. 1. for *Leucophaea* r. *Leucophaea*. p. 67. in the Note, for Barbados r. Barbados. p. 89. l. 26. after *sometimes* dele a great deal longer. p. 116. l. 27. dele equal before Knowledge. p. 118. l. 22. for Ten Pints r. Ten Pounds. p. 135. dele very prickly. p. 142. l. 10. dele having never an odd one at the End, and after small add unequal. p. 143. l. 32. dele they, and add with. p. 145. after Bay-berry add Plate X^o. p. 146. l. 24. for Bay-wood r. Bay-wood. l. 30. drying dele s. p. 159. l. 14. for its white Flowers r. the Flowers which are white. p. 166. l. 2. r. its Leaves which are auriculated. l. 4. dele as it were into Ears. p. 170. l. 34. for Capsula r. Capsula. p. 171. l. 33. for *Kitifania* r. *Kitifania*. p. 176. l. 12. for *Leuphola* r. *Leuphola*. p. 181. l. 3. for *Papa* r. *Papa*. p. 186. dele the Description of the Cockatoo. p. 192. l. 13. after Appearance r. but instead of sultry. l. 14. after sultry add they are then most generally produced. p. 202. l. 28. for on the Main r. on the Continent of America. p. 205. l. 32. for all over the Island r. in most Parts of the Island. p. 212. l. 35. for Capsula r. Capsula. p. 214. l. 4. for opposite to the Stalk r. opposite to the main Stalk. p. 218. l. 21. for red Leaves read red Petals. p. 223. l. 19. for *Papa* r. *Papa*. p. 224. l. 15. for short time r. some time. p. 242. l. 19. after with r. likewise. p. 245. l. 29. for *Melasse* r. *Melasse*. l. 36. after but add not for l. 39. for *Melasse* r. *Melasse*. p. 250. l. 21. for *Melasse* r. *Melasse*. p. 252. l. 35. for capillaries r. capillaries. p. 255. l. 11. for peculiarly r. peculiar to it. p. 260. dele Plate X. Fig. 4. p. 263. l. 29. dele when left. p. 267. l. 30. after but add by. p. 282. l. 15. after Toe add and Toe Nail. p. 280. l. 17. for *Rehine* r. *Echini*. p. 285. l. 25. for *Conny* r. *Conny*. p. 290. l. 27. dele Plate XVII. Fig. 7. p. 302. l. 24. after guarded add with Shen. p. 306. l. 28. for *Slippings* r. *Slippings*. l. 36. for *Slippings* r. *Slippings*.





T H E
NATURAL HISTORY
OF THE
Island of *BARBADOS*.
B O O K I.



THE greatest Extent of this Island is from Lat.

The Extent
of the Island.

-----	13 : 10
To Latitude -----	13 : 23
Difference -----	13 Min.
From Longitude West from <i>London</i> -----	58 : 49 $\frac{1}{2}$
To Longitude -----	59 : 02 $\frac{1}{2}$
Difference of Longitude -----	00 : 12 $\frac{1}{2}$

Its greatest Length from *Goulding's Green*, in *St. Lucy's* Parish, to *Ananias Point*, in the Parish of *Christ Church*, is ----- 20 : $\frac{3}{4}$ Stat. Miles.

Its greatest Breadth from *Kirtrige's Point*, in *St. Philip's* Parish, to a Point near Mr. *Peyne's*, in *St. James's* Parish, is ----- 13 : $\frac{3}{4}$ Stat. Miles.

The Circumference of the whole Island, from some of the surrounding principal Points, is ----- 54 : $\frac{1}{4}$ Stat. Miles.

Its first Appearance from the Sea to the Eastward, is somewhat hilly to the South-west, and North-west more level. Its Surface generally appears covered with a grateful Verdure, which, variegated with lofty (1) Trees, and large Buildings, affords many different, and those very beautiful Prospects. The highest Part of the Island is a rocky Cliff, in the Estate of *Francis Vaughan*, Esq; whose perpendicular Altitude is 915 Feet, the horizontal Base being taken from High-water Mark.

B

Among

(1) By lofty Trees, we are to understand those chiefly which are planted near Dwelling houses, generally more for Ornament than Use. As for large Timber-trees, so necessary to make and repair the Sugar-Mills, and other larger Buildings, we are obliged to bring these, at a great Expence, chiefly from the Islands of *St. Lucia* and *Tobago*.

Why called
Barbadas.

The original Names
of Places
expressive of
their Situation,
Nature,
or Quality.

Among many uncertain Conjectures, those who derive the Name given to this Island, from the Portuguese Language, are most properly in the Right; for, as they were the first Discoverers of the *West-India* Islands (if not of *America* in general), it is not unreasonable to suppose, that they might give this, and the neighbouring Islands, a Name analogous to something remarkable in their first Appearance; and nothing of this kind could be more surprising to *Europeans*, than to see the Shores shaded with a kind of Fig-trees, differing from all other Trees in the manner of their Growth; for, from their Branches hang innumerable small Filaments growing downwards, till they touch the Earth, and then take Root. These Thread-like Resemblances have been called by the *English*, from the first Settlement of the Island to this Time, the Beards of the Fig-trees: And in all Probability the *Portuguese* might originally have the same Notion of their Resemblance, and from thence called this, and the neighbouring Islands, conjunctly, *Las Barbadas*, i. e. *the Bearded Islands*; for *Cousa Barbada* in that Language signifieth any thing bearded. And, when this Island came to be inhabited by the *English*, it retained the general Name given originally to the Whole; whilst the neighbouring Islands, since settled, were, for Distinction-sake, obliged to be called by different Names. If we consult the most antient Histories, divine or human, we shall find, that the Etymology of the original Names given to Places and Things hath, in general, a relative Meaning, expressive of their Nature, Qualities, or Situation.

Thus, as early as the Time of *Moses*, when the *Spies*, who had been to view the Land of *Canaan*, had brought from thence a Bunch of Grapes, so large, that they bare it between Two, when the *Israelites* got Possession of the Country, they called the Valley by the Name of *Beer* in Memory of the Bunch of Grapes; for so the *Hebrew* Word *Eshcol* signifieth.

An unhealthy Part of *Arabia* was called by the *Hebrews* *Hatzar-maveth*, and by the *Arabians* *Hadramaut*, i. e. *the Gate or Entrance of Death*. And in *Genesis* it is said, that the Herdsmen of *Gerar* did strive with *Isaac's* Herdsmen, saying, *The Water is ours*: And he called the Name of the Well *per* *Ezek*, i. e. *Contention*, because they strove with him. Innumerable are the Instances which might be produced from several Languages, especially from the *Celtic* and *Greek*, to prove that several Words in those Languages are adapted to represent and be expressive of the Subjects treated of.

The Works of *Homer* are full of Instances of this Kind; and, among many others that might be produced, the original *Celtæ* called the Sun *Titan*; a Name evidently derived from *Ti*, a House, and *Tan*, Fire; which is very significant of the Notion most Eastern Nations had of that Planet.

If what hath been observed of similar Instances and Examples have any Weight, we may, from Parity of Reason, be satisfied with the present Etymology of the Name given to this Island, and proceed to observe, that the Atmosphere is, in general, serene and clear, seldom cloudy; and from a total Absence of Hail, Frost, or Snow, it is never liable to those many and sudden Vicissitudes, no less common than prejudicial in variable
Climates,

Climates, either to the Southward, or to the Northward, of the Tropics. And such is the Serenity and Clearness of the Atmosphere, that the Air is, in general, very healthy: But what chiefly conduces to its Purity, is the Regularity of the Trade-Winds, which, seldom varying throughout the Year, further from the East, than to the East-north-east, and consequently passing over a vast Tract of Water of about 3127 Miles (for about that Distance from us, is the nearest Point of (2) Land on the opposite Shore), or were it only even what lies betwixt the Tropic and our Latitude, it must necessarily blow upon the Island in cool refreshing Gales.

The Clearness and Purity of the Air accounted for.

It is likewise no small Advantage, or rather Happiness, that we have neither Bogs nor Marshes, to stagnate our Waters, which, being exhaled into Vapours, might be pernicious; nor large Forests of Trees, which not only prevent the Winds in their Passage, but likewise generate moist Air, caused by the great Quantity of Vapours which perspire through their Leaves, as well as from the shaded moist Soil: By this means the Inhabitants are free from the Fever and Ague, so common to the Inhabitants of uncultivated Islands.

As it cannot be foreign to my Subject, I beg Leave to offer a few probable Conjectures, to prove that the Current of the Deluge, between the Tropics, ran from East to West. One Argument that may be offered to prove this, is the shattered Condition of the Eastward Side of that Chain of Hills and Cliffs, which are as Barriers to this Island, from *Cuckold's Point*, to a Place called *Conset's Bay*; for, as they face the East, their torn State, in that Part alone, and no where else, shews, that they not only, by their Situation, first stemmed, but, as they were higher than any other Part of the Island, they wholly bore the repeated Percussions of the Current in the gradual Ascent of the Deluge, as well as, during the Continuance thereof, the Force of the Tides, until they were intirely overwhelmed; and even then, the higher they were, the nearer their Summits would be to the Surface; therefore the greater Arch of a Circle they would describe; and consequently, they would be more violently pressed and torn by the Water, than Places nearer to the Centre.

Arguments offered to prove, that the Current of the Deluge, between the Tropics, ran from East to West.

This is evidently seen from the boisterous Surface of the Sea in a Storm, whose Violence often washes, or rather tears off large Pieces of Rocks, whilst, at the same time, the tenderest Sea Plant, at any considerable Depth, is not disturbed.

From hence we may observe, that by how much the lower the level Land, and the Valleys were, than the Tops of the Hills, by so much less they were disturbed; and consequently, upon the Decrease of the Deluge, the sooner, and in greater Quantity, would the Dregs and Sediment (which trailed gently along an even Bottom) subside and settle: And from hence, in part, proceed the different Degrees of Fertility in the Soils of Hills and Valleys (3). Another Argument, that the Current of the Inundation,

(2) *Portaventura* in *Africa*.

(3) The very deep Soil of most fertile low Countries, such as *Egypt*, may be, in all Probability, primarily owing to the subsided *Facts* of the Deluge.

undation, in the Time of the Deluge, ran, as above described, is the coping Figure of the Island, from East to West; for, if we narrowly and attentively view the several gradual Descents of so many continued Ridges of Rocks, like Cascades, declining precipitately to the Westward (for Instance, that long Chain of Hills, from *Mount Gilboa*, in *St. Lucia's* Parish, to the *Black Rock*, in *St. Michael's* Parish), we cannot well otherwise conclude, from the deep Soil, on the Eastward of these, where the Land is level; and from the ragged, and bare-wash'd Surface, to the West; but that the latter was thus torn by the Violence of the Waters falling over them; and the former, the Effect of the subsided Sediment, upon the Decrease of the Deluge. The Want of such a Bed of Rocks, from *Black Rock* to *St. Anne's Castle*, caused that Chasm which opens to the Sea thro' *Bridge-Town*, opposite to the Valley of *St. George's*. What further confirms me in my Opinion, and brings what I have first offer'd, as conjectural, to a greater Degree of Certainty, is the Observation I made upon the ruinous Tops of most of the lofty Mountains in *North America*, as well as in *England*. In those Northern variable Climates, Nature felt the universal Shock promiscuously on every Point of the Compass; whereas our Hills and Cliffs, which extend along the East Side of the Island, discover no Indications, on the Western Sides, of any Violence receiv'd; but what was naturally occasion'd, by the falling off of the Waters, upon the Decrease of the Deluge. The Course of so many deep Chasms, or abrupt Fissures in the Earth (call'd here *Gullies*) always running from East to West, is likewise an additional, and even an unanswerable Argument in favour of what hath been urg'd upon this Head: And, that these were originally the Effect of the Deluge, tho' since much enlarg'd by repeated Torrents, will evidently appear by viewing the opposite Sides of those deep Chasms in the Earth, where are to be seen large Pieces of Rocks, that appear to have been once intire, but afterwards forcibly torn asunder: And as these divided Rocks are often to be found near the Heads or Beginnings of these Gullies, where the greatest Stream of collected Rain-water, even in the greatest Flood, is too small and weak to be the Cause of so violent a Separation; therefore we may, with great Reason, conclude, that this Disunion, and torn State, was effected by the Current of the (4) Deluge; and that its regular Course, to the Westward, between the Tropics, was but the natural Consequence of an (5) Easterly Trade-Wind, which guided and byass'd its Course to that Point. Former Descriptions of this Island begin with barely mentioning its Discovery by the *Portuguese*, and the Settlement of the *English* there, in the Reign of King *James* the First, in the Year 1625, without the least Inquiry, whether it had been ever before inhabited, and by whom. It is, indeed, said, that some of the first Discoverers of this Island

The Discovery of the West-India Islands by the Portuguese, and inhabited by the English.

(4) This Opinion was confirm'd to me by the concurrent Conjecture of Dr. *Warren*, a very ingenious Physician, late of this Island.

(5) The Cause and Nature of Trade-Winds are excellently explained by the great Dr. *Halley*.

Island, found no Inhabitants upon their Arrival. However, we ought not to conclude too hastily, that there never were any, until what is offered to prove the contrary, be fully considered. I was, indeed, once partly inclined to that Opinion, induced to it from the Remoteness of this, from the whole Cluster of Islands, viz. *St. Lucia, Dominico, Marygalant, Guadaloup, St. Christopher's, Antigua, and St. Vincent*; which last, tho' nearest, is about one hundred Miles distant. And as most of these are in Sight of one another, they are more convenient for mutual Commerce in Time of Peace, and Embarkation in Time of War. And what gives several of these the Advantage over this Island, with regard to an *Indian* Settlement, is their far greater Number of open Bays and Rivers, stored with Tortoises, and almost an incredible Plenty of Fish. But as we have late Instances of their coming hither from *St. Vincent's*, in their small Canoes, or Perriawgers, even for their Pleasure, I concluded, that they might formerly, more probably, come for their Interest; especially at certain Seasons of the Year, when the Fishing, or Game, in the other Islands, grew either scanty or shy, by being too often disturbed.

These probable Conjectures, upon a farther Inquiry, were corroborated by the Suffrage of many aged Persons; several of whom were between eighty and ninety Years old, who, not only agreed in their received Tradition, that there were *Indians* formerly in this Island, but likewise some of them added farther, that their frequent Arrival to, or Departure from it, was always in the Wane of the Moon, for the Benefit of light Nights; and that when a Difference arose between them and the *English*, the *Indians* retired to their Fastnesses in the Woods; and that in their Way down to their Canoes, they would artfully hide themselves with Coverings of green Boughs, to elude the Search of the *English*.

Now, since the Parents of these aged Persons, who give this Account, might be old enough to be Eye-witnesses of these Things; such, and so early a Testimony, where they had no apparent Inducement to deviate from the Truth, must, at least, be allow'd to carry with it the usual Weight and Credit in such Cases, till these Conjectures, strengthened by Tradition, and confirm'd by apparent Facts, grow to such a Degree of Certainty, as to leave every Doubt inexcusable.

The Method I shall take to prove their former (6) Residence in this Island (which to Posterity may be serviceable) will be to make it appear, *First*, That there are several Places, in this Island, called, to this Day, after their Names. *Secondly*, That in these very Places, there are daily dug up such Marks of their former Residence, as were peculiar to *Indians*. *Thirdly*, I shall compare these several Evidences with those confessedly satisfactory ones, in almost parallel Cases. I shall begin, by observing, that

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(6) I am countenanced, in this seeming Digression from the Subject, by many *Greek* and *Roman* Authors; especially by the Example of *Julius Caesar*, who, in his Commentaries, carefully traces the Origin, as well as describes the Manners and Customs, of the different Nations whose Countries he treats of.

The former
Residence of
Indians in
this Island
proved.

Bridge Town,
why so call-
ed.

the *Indians*, who inhabited this Island, could, in all Probability (by reason of the great Distance from the Continent), be no others than Colonies from some of the *Leeward Islands*, most probably from *St. Vincent's*, *St. Lucia*, or *Tobago*. From either of these, according to their Situation, with respect to *Barbados*, as well as with regard to a safe Harbour, they must probably land to the West, or West-south-west of this Island. Accordingly, as *Carlisle* (7) Bay is the largest and most commodious Harbour, it is natural to suppose that they landed here, and made the adjacent Part of the Island their Place of Residence. This is evidently confirmed by the Buttings and Boundings of several Tenements near this Bay; which, in very old Deeds, are said to terminate at or within a certain Distance from the *Indian Bridge*; from which the great Number of Houses built about this convenient Place, came soon afterwards to be called *Bridge Town*. The above-mention'd Bridge was placed over that Part of the Creek, or narrow Neck of the Bay, which divides Major *Gidney Clerk's* House from Colonel *John Fairchild's*. The Necessity that the *Indians*, residing on the North side of the Creek, were under to make a Bridge (which in all Likelihood consisted of no more than a few Trees, fell'd down, and laid across this Creek), will appear, when we consider, that their best, and almost only Supply of fresh Water, was on the South side of it, at a Place now call'd *Hannington's Spring*.

The Residence of
Indians further
proved.

The next small Rivulet running to the Sea to the Leeward of *Bridge Town* is at present, as well as in many old Deeds, call'd *Indian River*. It was likewise at this Place that some *Indians*, from *St. Vincent's*, landed, in or about the Year 1738. And as *Indians* are remarkably nice in chusing a dry healthy Situation, this, with so few or no Footsteps of their long Abode here, gave me room to believe, that they kept moving along the Sea Shore so long as they met with convenient fishing (8) Bays: And as the last of these, of any Note, to the Leeward of the Island, is *Six Mens Bay*, and *Rider's Bay*, let us but allow these to be then, as they are at present, as well stored with Fish as any other, and we shall soon fix their Residence, for at least a while, in this convenient Place; for these *Indians* (as shall be presently shewed) were but ill provided with Tools to fell Timber. This, join'd to their great Indolence, caused them to search (especially in wet Seasons) for their natural sheltering Place, the first convenient Cave; and, as there is a very commodious one in the Side of a neighbouring Hill, called to this Day the *Indian Castle*, and almost in a direct Line from *Six Mens Bay*, and not above a Mile and a half off, in a pleasant Part of the Country, it is more than probable (especially as there was

no

(7) This Harbour is call'd *Carlisle Bay*, from a Royal Grant of this Island to the Earl of *Carlisle*. The adjacent Town, call'd *Bridge Town*, consists of about twelve Hundred Houses, all built of either Stone, Brick, or Timber; the other chief Towns are *Speight's Town*, *Austin's Town*, and the *Hole Town*.

(8) As the Bays, near the *Hole Town*, were well stored with Fish, this seemed to be their second Settlement from *Indian River*: But as it was necessary, in stormy Weather, to provide a Shelter higher up in the Country, I found several Remains of their Abode, under the Shelter of a high Cliff, in the Estate of *Samuel Barwick, Esq;* deceased. We are likewise informed by Tradition, that five *Indian Women*, upon Promise of good Usage from the *English*, upon the Desertion of the rest of the *Indians*, lived and died in that Place; and, about two Miles from hence, there is a Tract of Land called *Indian Wood*, or *Indian Town*.

Fig. 1



Fig. 11



Fig. 111

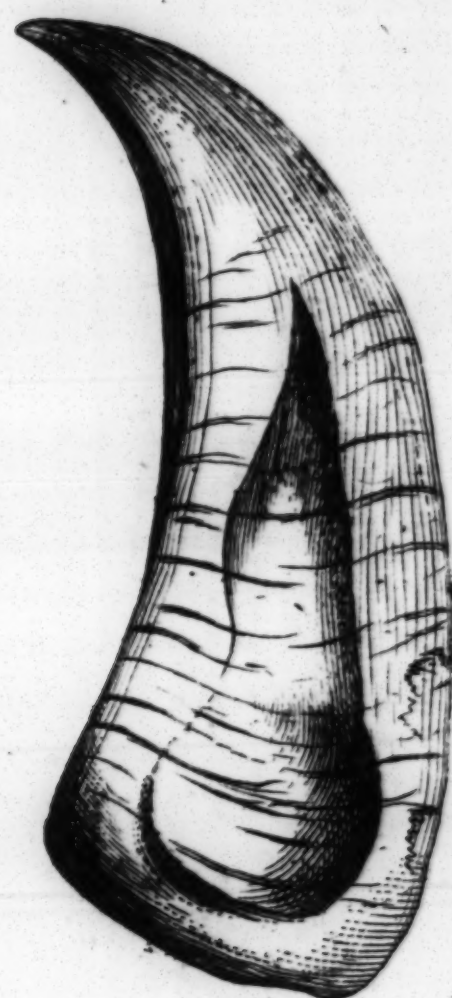


Fig. v

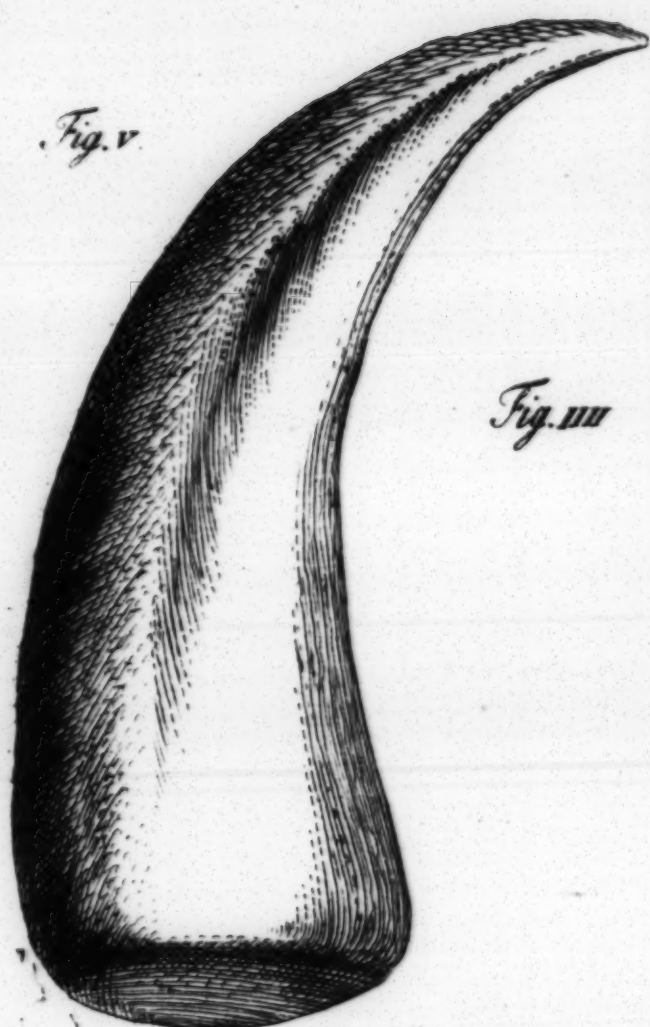
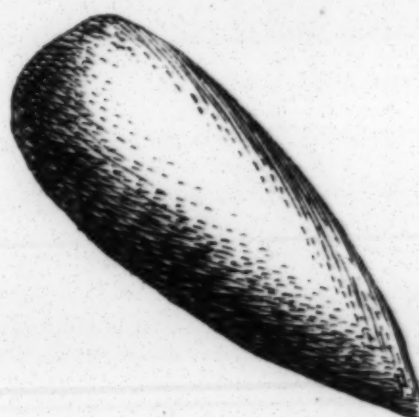


Fig. 1111



To Martin Folkes Esq^r
President of the Royal Society.
This Plate is most humbly Inscribed
&c.

no other so near, and so convenient) that they should pitch upon this, being upon several Accounts very commodious; for, as the Mouth of it faced the West, and, being under the Shelter of an Hill, was secured from the Wind and Rain, and even from Danger by Hurricanes, and as the Entrance to it is so steep and narrow, that, upon Occasion, one Man may defend himself against an hundred, it may be justly called their Castle. But what made this Place more complete, (and affords, I think, an undoubted Proof of their Residence here), is an adjoining clayey Bottom, where they dug a Pond or Reservoir to hold Rain-water; which Place is, and hath been, *since* the Memory of the oldest Neighbours alive, call'd the *Indian Pond*. With Part of the Clay (9), which they dug out, they made their Earthen-ware, such as Pots and Pans; and, like the Idolaters of old, out of the same Materials they made to themselves Gods, and worshipped them. Among several broken Fragments of Idols, said to be dug up in this Place, I saw the Head of one, which alone weighed above sixty Pounds Weight. This, before it was broken off, stood upon an Oval Pedestal above three Feet in Height; and is describ'd in *Plate 1. Fig. 1.* The Heads of all others that came within my Observation, were very small; one of these (which is described in *Plate 1. Fig. 2.*) exceeds not in Weight fifteen Ounces; and all, that I have hitherto seen, are of Clay burnt. These lesser Idols were, in all Probability, their *Penates*; made small for the Ease and Conveniency of being carried with them, in their several Journeys; as the larger Sort were perhaps designed for some stated Places of Worship.

Indian Idols discovered.

The last Proof of their Residence in this Place, is a great Number of their Stone Hatchets and Chissels, that are here dug up: These are represented in *Plate 1. Fig. 3, 4, and 5.* The Use of these (10) Hatchets and Chissels was in all Likelihood to cut down Timber, to make Huts, where they had not the Conveniency of Caves; as well as with the Help of Fire to fell some of the largest Kind, to make Canoes. These, I imagine, after they were roughly squared, were half burnt with live Coals; and then, with their scooping Chissels, they, by Degrees, made them hollow.

Indian Hatchets and Chissels discovered.

Having proved their Residence in this Place, it will not be surprizing to those, who know the roving Disposition of *Indians*, to find, that they moved under the Shelter of the Hills, and almost always at equal Distance from the Sea, till they came to a large convenient Cave, under a Hill, called *Mount Gilboa*, in the Estate of Colonel *John Pickering*; where I found several of their broken Images, Pipes, Hatchets, and Chissels. And, though this, and the before-mentioned Cave, were for several

(9) By the great Number of the Remains of *Indian Pot-kilns*, in this Island, and the known Scarcity of Clay in many, if not in all of the *Leeward Islands*, I make no doubt, but they were supplied with Earthen-ware from hence.

(10) Some of the Hatchets, and a great Number of the Chissels, especially the scooping ones, are made of the most substantial Inside Part of a Conch-shell; others, of the hardest common Stones; and a few, of the cutting Sort of a Stone of an opake greenish Colour, variegated with several white Veins, somewhat resembling the Spleen-stone. *Vide Plate 1. Fig. 5.*

several Reasons very convenient ; yet there was one essential Happiness wanting ; for, upon very heavy Rains, the Water in these artificial Ponds, being disturbed, became muddy : And, as their greatest native Luxury (if it may now-a-days be so called) was to drink of the purest Stream, it was natural and customary for them to ramble in Search of Spring-Water, which at a little Distance from hence they found in the Estate of *Edward Bonnet*, Esq; Here they settled, near a small perennial Spring, which is the only one for several Miles round it. The Situation of this Place afforded another additional Conveniency, being, by the Goodness of the Soil, very proper to produce *Yams*, *Plantain*, and *Banana* Trees ; but as there was no Cave to afford Shelter, they were obliged to cut down Timber to build Huts ; and from thence, in all Probability, it comes, that there are found, about this Place of their Residence, so many Fragments of broken Hatchets, Chissels, and Pots. There are not only near this Place, but likewise at *Maycock's Bay* (11), *Joan's Hole*, *Cluff's Bay*, and near *Scotland Church*, as well as in other Places, many Tokens of their former Abode. To this may be added, that there is a Tradition in a Family of Negroes, belonging to *Thomas Tunckes*, Esq; the Ancestors of which Family came over with the first Negroes that ever came hither from *Guiney*, that before the Country was cleared from Woods, there was an *Indian Town* near a Pond, in his Estate, in the Parish of *St. Michael's*, which Reservoir to this Day is called the *Indian Pond* ; and, when these *Indians* could not for a long time be brought into Subjection by the *Whites*, the last Attempt was so vigorous, that it obliged all the *Indian* Inhabitants of the Town to make their Escape in their Canoes to the neighbouring Islands ; which they all did, except one Woman, and her Son a young Lad. The latter soon afterwards making his Escape also, his Mother, in a short time, pined to Death. Several Earthen Vessels, of different Sizes, have been dug up near the above-mentioned Pond, within these thirty Years last past : These were generally of a globular Figure, of a Slate Colour, but very brittle otherwise, far surpassing the Earthen-ware made here by Negroes, in Thinness, Smoothness, and Beauty.

An Indian
Town.

Indian
Earthen-
ware.

Let us now sum up these Testimonies, and put the Certainty of what I have offered on this Head, upon the Authority of these Proofs. As for the first Proof, that there are several Places in this Island called after their Names ; this, tho' the least, carries with it a Degree of Conviction, which cannot be well gainsaid ; for, who will pretend to dispute (without being led into the several Particulars of the History of the Times) whether the *Celtæ* did not formerly possess and inhabit that Part of *France*, called *Armorica*, when he finds the most antient Churches, and notable Places, retain their *Celtic* Names to this Day ? Or, what Sceptic would be hardy enough to dispute, whether the Urns dug up in *England* were not originally deposited there by the *Romans* ? Such
a moral

(11) There is near this Bay a very convenient Cave for Shelter in stormy Weather.

a moral Certainty commands the Assent of every unprejudiced Person. The several Places in this Island called and supposed to be *Indian* Settlements, confirmed by early Tradition, and further corroborated by the Discovery of several rude Idols, Hatchets, and other Tools, dug up in these Places, different in Shape and Substance from those used by every civilized Nation, and peculiar (after the Use of Iron was found by the more civilized) to *Indians* only; these Things (I say) being considered, and impartially suffered to have their proper Weight; there will, I believe, be very little occasion to multiply or add any further Arguments, to prove that *Indians* formerly resided (for at least certain Seasons of the Year) in this Island.

The Residence of *Indians* being proved, it may be expected, that we inquire into the Disposition of the present Inhabitants. Of these it may be justly said, that they are generous and hospitable, firmly attached in their Principles to the present happy Establishment, in Church and State. The Men have a natural, as well as, by the frequent Use of Arms, acquired Bravery; with no small Share of useful Learning, and Knowledge in Trade. The Women, in general, are very agreeable; and several of them might any-where pass for Beauties. There are many Instances of their prudent Behaviour and Oeconomy, greatly assisting to improve a moderate, and retrieve a broken Fortune.

The present
Inhabitants
of Barbados.

Their Cha-
racter.

I must here beg leave to endeavour (a Thing hitherto unattempted) to ascertain some reasonable Cause of that general Observation, that the Inhabitants of hot Countries are of a more volatile and lively Disposition, and more irascible in general, than the Inhabitants of the Northern Part of the World. The former is evidently apparent from the more sublime Compositions of almost all Eastern Authors, their lively Imaginations (as a learned (12) Critic hath observed) transporting them, with incredible Warmth and Activity, from one Thing to another; and thereby causing them to overlook those Rules of Method and Connexion, that are observed by *Europeans* of a cooler and more regular Fancy. Instances of this we have in the Works of *Pindar*, and throughout the whole Book of *Job*. Nor is it with me a Doubt, whether different Climates may not cause a constitutional Difference. *Herodotus*, as well as *Cicero*, was of this Opinion. The latter says, *Videmus quam varia sunt terrarum genera aliae quæ acuta ingenia gignant, aliae quæ retusa: quæ omnia sunt ex cæli varietate, & ex disparili adspiratione terrarum.* *CICERO* de Div. No. 79.

Idem de Fato, No. 7. *Inter locorum naturas quantum intersit videmus; alios esse salubres, alios pestilentes*

Athenis tenue cælum, ex quo auctiores etiam putantur Attici: crassum Thebis; itaque pingues Thebani.

And *Horace*, speaking of the Works of a dull Author, says,

Bæotum in crasso jurares aere natum.

HOR. Lib. II. Ep. I. 244.

D

But,

(12) Vide Doctor *Hunt's* Explanation of *Job*, Chap. vii. Ver. 22. 23.

But, without laying any Stress upon the above Instances, it will not be very difficult to explain, in some measure, the Reason of so visible a constitutional Difference in the Inhabitants of hot and cold Climates.

The constitutional Difference of the Inhabitants of hot and cold Climates examined in a new and physical Manner.

As (13) Heat in the former rarefies and increases the Velocity of the Fluids, consequently the Particles of Blood, thus expanded, meeting in their Circulation (even in the minutest Vessels) no Obstacle from the external Pressure of Cold, nor any Languidness by immoderate Heat, it follows, that as Health consists in an equal Motion of the Fluids, and Resistance of the Solids, such an even Temperament of the Air must be more friendly to, and productive of, Health and Chearfulness, than in Climates where often, by severe cold Weather, the Globules of Blood lose in a great measure their Motion, especially towards the Extremities of the Body, where at such times they cohere in Masses too large to pass freely through the minute capillary Vessels. When this Harmony between the Solids and Fluids is disconcerted, then arises, as Experience teaches us, a sudden Sense of Pain, which cannot be removed till the Blood is, as it were, thawed by Heat, and so recovers its uninterrupted Motion: And tho' we know not certainly how to define what the Animal Spirits are; yet, on Supposition that they are the most refined and active Particles of the Blood, as they are with great Reason thought to be, their pleasing, or painful, Influence on the Body must, in a great measure, depend upon the regular or irregular Motion of their original constituent Fluid, the Blood: Now, when this is checked in its Circulation, either by a sudden Pressure of an heavy Atmosphere, or the Variableness of the Winds from warm to cold; the Animal Spirits, which before were agreeably diffused through the whole Body, by these sudden Interruptions in the Blood, their original Source, likewise become unable to perform their Functions; for, when Nature is impeded in any of her Operations necessary to our Well-being, whether natural, vital, or animal, that mutual and inseparable Connexion between the Mind and the Body will appear so visibly, that if the latter be affected with Pain, the necessary Consequence of Obstructions in the Fluids, the former soon loses that Chearfulness which is naturally less interrupted, and may be better preserved, in Climates obnoxious to no sudden Vicissitudes of Weather, from moist to dry, from hot to cold; for an even Temperature of the Air is best adapted to support the (14) Body in that State which is requisite

(13) It may perhaps be said, that as Heat increases sensible, and diminishes insensible Perspiration, it will render the Blood, in hot Climates, more viscid, and consequently its Circulation more languid: This, in general, may be true, especially of those who are daily exposed to hard Labour, and consequently sweat much: But, with regard to the *white* Inhabitants of this Island, this supposed Viscidity is not so great; or, if it were, it is more than counterbalanced by the daily Use of a great Quantity of Diluters of every kind, *viz.* Water, and weak Punch made very acid with Lime or Lemon Juice. The same Argument will be of Force, with regard to the Inhabitants of any other hot Climate, under equal Circumstances.

(14) This is evidently proved by the great Number of decayed Constitutions in variable Climates, who, whilst exposed to the Vicissitudes of the different Seasons of the Year, are in daily Expectation of making their Exit; but, when once bed-ridden, have lived many Years: And will any one say, that their Lives, under Providence, were not prolonged by being always kept in an equal Degree of Heat and Cold, in a close Room, and a warm Bed? However, it must be owned, that warm Climates have their Inconveniencies; they are very improper for those Constitutions which require much bodily Exercise; for it

requisite to the due Exertion of the Animal Oeconomy, and consequently, in some measure, of the rational Faculty.

Nor is the sudden Alteration, upon the Change of Wind and Weather, peculiar to the human Constitution alone; for other Animals feel the Vicissitudes of the Weather, especially in variable Climates. This is a Remark as early as the Time of *Virgil*, which appears by the following Lines:

. . . *Ubi tempestas & cæli mobilis humor
Mutavere vias, & Jupiter humidus Austris
Densat, erant quæ rara modo; & quæ densa, relaxat.
Vertuntur species animorum, & pectora motus
Nunc alios, alios, dum nubila ventus agebat,
Concipiunt. Hinc ille avium concentus in agris,
Et lætæ pecudes, & ovantes gutture corvi.*

GEO. I. 416.

But with the changeful Temper of the Skies,
As Rains condense, and Sunshine rarefies;
So turns the Species of their alter'd Minds,
Compos'd by Calms, and discompos'd by Winds.
From hence proceeds the Birds harmonious Voice:
From hence the Crow exults, and frisking Lambs rejoice.

Thus far have we briefly endeavoured to account, from the Nature of the Climate, and the Mechanism of the human Body, for that volatile Disposition, so peculiar to the Inhabitants of hot Climates: That Irascibility of Temper, likewise, which is ascribed to them, is, in a great measure, the natural Consequence of the above-mentioned Disposition; for, as Water that is already hot, will, with a little additional Heat, boil over, so when the Animal Spirits are in a high Flow, and the Will, by the Propensity of long-rooted Habits, unhappily assists, and is bent to gratify some favourite Passion, the Transition from a Degree of Sprightliness to Irascibility is natural and easy.

If we pursue this Argument a little further, it will appear more conclusive by reasoning upon, and experimentally comparing the Correspondency between artificial and natural Heat, and their similar Effects upon human Bodies.

This will, in some measure, answer to two different and opposite Climates: For Instance, If, in very cold Weather, the Inhabitants of far Northern Countries drink such a Quantity of strong spirituous Liquors, as will cause a free Circulation to the Blood, before almost congealed with Cold, they will assume a sudden lively Chearfulness: Should they still drink

it cannot be taken without Danger of being surfeited; nor is it less improper to Persons who labour under any Degree of Phrensy or Madness, whose periodical Fits, at the Full and Change of the Moon, return here with greater Violence than in a cold Climate: Yet, tho' we enjoy, or may enjoy here, in general, by a regular Conduct, a more chearful Scene of Life, free from the unequal Changes of Heat and Cold; yet it must be owned, that we are, in a great measure, Strangers to those invigorating Starts of Liveliness, which the Animal Spirits diffuse thro' the whole Body in moderate frosty Weather, and a clear Air, in England.

drink on, they then hurry on the Blood, from a free to a rapid Motion: And if these are the natural Effects of spirituous Liquors in a very cold Climate, what and how great must they be in the opposite Extreme? For the Velocity of the Blood, occasioned by the Warmth of the Climate, naturally attenuates and breaks the Cohesion of its Parts, hereby accelerating its Motion to such a Degree, as to raise a more than ordinary Flow of Animal Spirits: These, in such Cases (as Experience teaches us), are too often, in most Constitutions, accompanied with an uncontrollable Flow of the irascible Passions of the Soul.

If we allow *Horace* to be a Judge of Nature, such frequent Observations upon the Effect of strong Drink might give him the Hint to caution us against the Excess of it:

*Tres prohibet supra
Rixarum metuens tangere Gratia.*

HOR. Lib. III. Ode 19.

It might likewise give Birth to that frequent Custom of raising Courage in common Soldiers, who often want nobler Motives to heroic Deeds, by giving them strong Liquors to heat their Blood immediately before an Engagement, that, by the Assistance of such a borrowed Flow of Animal Spirits, they may be the more resolute, and thoughtlessly rush into the Heat of Battle, and there act with an Intrepidity suitable to such dangerous Circumstances; for, as the same Author elsewhere observes,

Quis post vina gravem militiam, aut pauperiem crepat?

HOR. Lib. I. Ode 18.

Who in his Cups can feel the Weight
Of Arms, or of a pinching State?

Should the grave Behaviour of the *Spaniards*, compared with the Sprightliness of the *French*, who live in a colder Climate, be brought as an Argument against what I have said, it is easily answered; for, perhaps the too grave Behaviour of the one, and the too volatile Disposition of the other, may not be intirely constitutional to either; for the one may be partly the Effect of cultivated Levity, as the rigid Deportment of the other in Part the Improvement of an affected Gravity.

But, however this may be, another very natural and very convincing Reason why the Inhabitants of some of the very hot Parts of *Spain* are more liable to be pensive, melancholy, and revengeful, than others, is, that the scorching Heat of the Sun is there of long Continuance: And as Heat, in general, produces that Disposition which is called *bilious*, it increases the oily Parts of the Blood, and renders them lighter, and more moveable, by lessening their Tenacity: Then the other constituent Parts become more piquant, and the Salts they contain are more active, in proportion as the blunting Oil is attenuated.

The

The greater the Heat, the longer it is continued, the more obvious will its Effects be; Liveliness and Activity will be remarkable where this Disposition is moderate, as it is in the *West-India* Islands, which enjoy the Benefit of the Trade-Winds, and moist Vapours; but where such Breezes are wanting, long-continued Heat, such as they feel in *Spain*, is capable of absorbing every thin Fluid; and, consequently, such a Disposition of the Juices inclines to Pensiveness, Reserve, and often deliberate Revenge.

Add to this what I before hinted at, with regard to the *West-Indies*, that Habits, especially such as have been early indulged to our depraved Nature, have a great Share in forming our future Conduct in Life.

This leads me to observe, that Children, in these *West-India* Islands, are, from their Infancy, waited upon by Numbers of Slaves, who, in their most unwarrantable Conduct (unhappy for both!), are obliged to pay them unlimited Obedience; and as, in these tender Years, their natural Appetites are stronger than their Reason, when they have thus their favourite Passions nourished with such indulgent Care, it is no Wonder, that by Degrees they acquire (unless happily prevented, or corrected, by the good Examples of Parents, or Education) an overfond and self-sufficient Opinion of their own Abilities, and so become impatient, as well as regardless, of the Advice of others.

And, as this is a Matter of Fact, unhappily verified by numberless Instances, it is not surprising, if, in Minds thus early indulged in the Gratification of their Appetites, and too often undisciplined by the Restraints of Education, we sometimes find the irascible Passion domineering, and insolently triumphing, over Reason: Nor can such an Influence be worthy of Surprise, when we consider, that Habits and Customs leave deep Traces, and lasting Impressions, upon the more solid Structure of the human Frame.

A notorious Instance of this kind is mentioned by *Herodotus*, who says, that, passing by *Pelusium*, where there had been fought, many Years past, a bloody Battle between the *Persians* and the *Egyptians*, the Skulls of the Slain, on each Side, being still in different Heaps; he found, upon Trial, that a strong Blow could not easily break those of the *Egyptians*, whereas those of the *Persians*, by the constant Warmth of their Turbants, scarce ever feeling the Variety of the Seasons, were so very tender, that they did not resist the least Blow.

From hence *Herodotus* (15) justly attributes the Hardness of the *Egyptians* Skulls to the Habit of that Nation, whose Custom it was to shave
E
their

(15) Θάψμα δὲ μέγα εἶδον πυθόμενος, ὅτι τῶν ἐν ταῖς χερσὶν ἡμῶν περικεχυμένων χωρὶς ἐκείνων τῶν ἐν τῇ μάχῃ ταύτῃ πεσόντων (χωρὶς μὲν γὰρ τῶν Περσῶν ἔκειτο τὰ σκῆλα, ἀλλ' ἐχρησμένη καὶ ἀρχαῖα, ἐπὶ τοῖς δὲ Αἰγυπτίωσι) αἱ μὲν τῶν Περσῶν κεφαλαὶ αἰσὶ ἀδυνάεις ἦσαν, αὐτοὶ δὲ δάκρυα ἔχοντες μὴν βαλόντες, διέσπεναν. αἱ δὲ τῶν Αἰγυπτίων ἦσαν δὴ τι ἰσχυροί, ὥς μόνον ἀνὰ λίαν πίστεως διαρρηγνύσθαι. αἴτιον δὲ τότε τότε εἶλον (καὶ ἐμὲ γ' ἐννοήσαντες ἐπειθεύον) ὅτι Αἰγυπτίωσι μὲν αὐτὰ ἀπὸ παιδίων ἀρεσάμενοι, εὐρυγύλαι τὰς κεφαλὰς, καὶ περὶ τὸ ὅλον παχύ. ἦσαν τὸ ὅσον τὴν ταύτην δὲ τότε καὶ τὴν μὴ βαλακνύσαν αἴτιον ὅτι Αἰγυπτίωσι γὰρ τὴν ἐλαχίστην ἰδίῳ βαλακνύσαντες πάντων ἀνθρώπων. ταῦτοι μὲν δὲ ταῦτο ὅτι αἴτιον ἰσχυρὰς ποιεῖν τὰς κεφαλὰς. τοῖσι δὲ Πέρσῃσι δὲ ἀδυνάεις ποιοῦσι, αἴτιον τότε σκιντερεῖναι δὲ ὄρχας, τίλινος τίλινος τε ποιοῦσιν. Herod. Thalia, Cap. XII. Edit. Gale.

their Heads often; and, by exposing them to the different Vicissitudes of Wind and Weather, their Skulls grew to an extreme Hardness.

The Number of Negroes in the Island.

The former *Indians*, and the present *English* Inhabitants, being considered, it will not be here improper to take some Notice of the Nature and Disposition of our Negroes, or black Inhabitants, employed in cultivating our Land: These are between Sixty-five and Seventy thousand, tho' formerly we had a greater Number: Yet we are obliged, in order to keep up a necessary Number, to have a yearly Supply from *Africa*.

Their different native Countries.

The hard Labour, and often the Want of Necessaries, which these unhappy Creatures are obliged to undergo, destroy a greater Number than are bred up here: These new Slaves are chiefly brought from the Kingdoms of (16) *Coromantee*, *Angola*, (17) *Whiddaw*, *Ebo*, and *Anamabw*. The first of these, in general, are looked upon to be the best for Labour, being, in some measure, inured to it in their own Country.

We have had likewise formerly some Slaves brought hither from the Island of *Madagascar*: These differ something from the *Africans* in the Colour of their Skins, being not of a Coal-black, but somewhat inclined to the Tawny; yet still a Degree blacker than the *Indians*.

It hath perplexed the Learned to find out some natural Cause of the Negroes Complexion, so remarkably differing from the rest of Mankind.

The black Colour of Negroes proved to be not owing to the Heat of the Sun.

Some have endeavoured to account for it, from the intense Heat of the Sun in these and such-like hot Climates: But this is so far from being true, that I have always observed, that the Hair of those who are exposed to the Sun's Heat, turns from a true black, to a brown reddish Colour. As to the Blackness of the Negroes Skin, this reaches no deeper than the outward *Cutis*; for, when this peels off by being scalded, or by any other Accident, the Part ever after remains white.

Neither can the extraordinary Curling of their Hair be owing to the Heat of the Sun; for the (18) *Indians* have always lank Hair, tho' generally exposed to its Heat.

Shape and Stature of Negroes.

As to the Stature and Make of Negroes, excepting that a greater Number of them have their Noses shorter, and Lips thicker, than the *Whites*, I never could find out any extraordinary Difference: They are generally strait-limb'd, which is occasioned, in some measure, by their not lacing with Bandages their Children when young, according to the too

(16) This Nation of Negroes, above all others, deprecate the divine Vengeance when it thunders.

(17) The *Whiddaw* and *Angola* Negroes are generally circumcised.

(18) The *Indians*, tho' they resemble *Mulattoes* in Colour, yet they are a distinct Race, and far from deriving their Origin from a Mixture between a *white* Man and a *black* Woman; for such a Mixture, which are called *Mulattoes*, hath always very curled Hair, the *Indians* always lank and strong. A *Mulatto* Woman cohabiting with a *black* Man, and the Children of these with *Blacks* likewise, their Descendants, in three or four Generations, will gradually lose their Copper-colour Complexion, and Length of Hair; the former being almost absorbed in the natural Blackness of the Negro Hue, and the latter loses its borrowed Length, becoming weak, short, curled, and woolly: Likewise, on the contrary, if a *Mulatto* Woman is married to a *white* Man, and their Children continue to marry *white* People, their Complexion will be so far bleached in about six or seven Generations, as to terminate in what we call in *England* a Nut-brown Complexion. A few Generations further will lose all Distinctions in Colour, and the Quality of their Hair; so that the *Whites*, the *Indians*, and the *Blacks*, differ not accidentally, but originally and really: And therefore, as those Men who pretend to account for the Origin of the *Blacks*, or *Indians*, bring neither Proof nor Authority to strengthen their Opinions, these must be looked upon at best but uncertain Conjectures.

too usual Custom of a few of the *white* Inhabitants here, as well as the almost universal Custom in most Northern Countries, which not only prevents the free Circulation of the Blood, but is often the Cause of unnatural Distortions of the Body.

The Negroes in general are very tenaciously addicted to the Rites, Ceremonies, and Superstitions of their own Countries, particularly in their Plays, Dances, Music, Marriages, and Burials (19). And even such as are born and bred up here, cannot be intirely weaned from these Customs: They stand much in Awe of such as pass for *Obeah* (20) Negroes, these being a sort of Physicians and Conjurers, who can, as they believe,

Negroes
strongly ad-
dicted to
the Rites
and Cere-
monies of
their native
Countries.

not

(19) There are but few Negroes who believe that they die a natural Death, but rather that they are fascinated, or bewitched. The Bearers, in carrying the Corpse of such a one to the Grave, when they come opposite to, or in Sight of the House of the Person who is supposed to have bewitched the Deceased, pretend to stagger, and say, that the Corpse is unwilling, and will not permit them to carry it to the Grave, until it is suffered to stop near, or opposite to, that House: After this is complied with for a few Minutes, the Corpse is, as they think, appeased, and then the Bearers, without Difficulty, carry it to the Grave. If likewise, in digging a Grave, they find a Stone which they cannot easily get out, they immediately conclude, that the Deceased is unwilling to be buried there; therefore they dig elsewhere, until they find a Place more propitious to the supposed Inclination of the Dead. Most young People sing and dance, and make a loud Noise with Rattles, as they attend the Corpse to its Interment: Some Days after, especially on their Feasts, they strew at Night some of the dressed Victuals upon the Graves of their deceased Parents, Relations, or Friends. Something like this Custom was observed by the Romans, in their Feasts called *Silicernia*, at which Times there was a Repast prepared for the Dead, at least in Honour of them, and laid on their Graves. This appears from the following Words of *Ovid de Fastis*, Lib. II. 533, &c.

*Est honor & tumulis. Animas placate paternas,
Parvaq; in extinctas munera ferte pyras.
Parva petunt manes. Pietas pro divite grata est
Munere. Non avidos Styx habet ima Deos.
Tegula projectis satis est velata coronis;
Et sparsa fruges, parvaq; mica salis.*

Tombs have their Honours too; our Parents crave
Some slender Present to adorn the Grave.
Slender the Present, which to Ghosts we owe:
These Pow'rs observe not what we give, but how:
No greedy Souls disturb the Seats below.
They only ask a Tile with Garlands crown'd,
And Fruit, and Salt to sprinkle on the Ground.

(20) These *Obeah* Negroes get a good Livelihood by the Folly and Ignorance of the rest of the Negroes. I shall here insert one Instance of their pretended Method of curing the Sick, which was performed upon a Negro Woman; who, being troubled with Rheumatic Pains, was persuaded by one of these *Obeah* Doctors, that she was bewitched, and that these Pains were owing to several Pieces of Glass, rusty Nails, and Splinters of sharp Stones, that were lodged in the different Parts of her Body; adding, that it was in his Power, if paid for it, to cure her, by extracting these from her through her Navel. Upon the Payment of the stipulated Premium, he produced his Magical Apparatus, being two Earthen Basons, a Handful of different Kinds of Leaves, and a Piece of Soap. In one of these Basons he made a strong Lather, in the other he put the bruised Herbs; then clapping these with one Hand to the Navel, and pouring the Suds by Degrees upon them, he stroked the Parts most affected with the other Hand, always ending towards the Navel: In a short time after, thrusting his Finger and Thumb into the Cataplasm of Herbs, he produced several Pieces of broken Glass, Nails, and Splinters of Stones (which he had before artfully conveyed among the bruised Herbs). As such a great Number extracted, was looked upon as an extraordinary Instance of the Doctor's great Skill, he unluckily demanded a farther Reward than what was stipulated: But as the Woman's Husband was one of those very few, who had no Faith in such pretended Cures, being accidentally knowing in some of their Secrets, instead of an additional Reward, he made him by Threats refund the Money he had already received, bidding him, if he was a Conjurer, find out by his Art some Means of getting it again restored to him.

Their Method of clearing themselves from imputed Crimes hath a near Affinity to the bitter Water used among the Jews. In the latter Case, the Priest took some of the Dust of the Floor of the Tabernacle; and, mixing it with Water, he gave it to the Woman suspected of defiling her Husband's Bed, saying unto her, If thou hast gone aside to Uncleaness with another, instead of thy Husband; then this Water, that causeth the Curse, shall go into thy Bowels to make thy Belly to swell, and thy Thigh to rot: And the Woman shall say, *Amen, Amen*. In like manner, the Negroes take a Piece of Earth from the Grave of their nearest Relations, or Parents, if it can be had; if not, from any other Grave. This being mingled with Water,

Their Superstition.

not only fascinate them, but cure them when they are bewitched by others. And if once a Negro believes, that he is bewitched, the Notion is so strongly riveted in his Mind, that, Medicines seldom availing, he usually lingers till (21) Death puts an End to his Fears.

The Capacities of their Minds in the common Affairs of Life are but little inferior, if at all, to those of the Europeans. If they fail in some Arts, it may be owing more to their Want of Education, and the Depression of their Spirits by Slavery, than to any Want of natural Abilities; for an higher Degree of improved Knowledge in any Occupation would not much alter their Condition, for the better.

That Slavery not only depresses, but almost brutalizes human Nature, is evident from the low and abject State of the present *Grecians*, when compared with their learned and glorious Ancestors.

Their Custom of wearing Strings of Beads round their Legs and Arms.

Our Slaves, in their Mirth and Diversions, differ according to the several Customs of so many Nations intermixed: However, all agree in this one universal Custom of adorning their Bodies, by wearing Strings of Beads of various Colours, intermixed sometimes by the richer sort of House Negroes with Pieces of Money. These Beads are in great Numbers twined round their Arms, Necks, and Legs. This Custom is not peculiar to the Inhabitants of *Africa*; for we find it by the most antient Account to be common in all Eastern Nations, especially among the *Jewish* Women, as early as the Patriarchal Age: And their Fondness for these Ornaments came at last to so great Excess, that we find it among the Crimes reproved by the Prophet *Isaiab*.

That they were likewise in Use among the *Greeks*, is evident from a Piece of Painting of above Seventeen hundred Years old, now in the curious Collection of Dr. *Mead*, where the *Graces* are represented in a Dance, having their Legs adorned with Bracelets.

These Slaves, in some of their rude Dances to (22) Music still ruder, use Gesticulations very unseemly and wanton; at other times, they have a sort

Water, they drink it, imprecating the divine Vengeance to inflict an immediate Punishment upon them; but in particular, that the Water mingled Grave-dust which they have drank (if they are guilty of the Crime) may cause them to swell, and burst their Bellies. Most of them are so firmly persuaded, that it will have this Effect upon the Guilty, that few, if any (provided they are conscious of the imputed Crime), will put the Proof of their Innocency upon the Experiment. This Custom, with the Use of Bracelets, and the Circumcision of some Nations of Negroes, are the almost only Instances of this kind, wherein I find that these Inhabitants of *Africa* agree with the former *Jews*, except that they likewise, in saluting their Friends and Acquaintance, often call them by the Name of Brothers: This seems to be analogous to the Custom of the antient *Jews*, who included Consanguinity, as well as Fraternity, in that Relation. We are Brethren, says *Abraham* to *Lot*; whereas he was only his Nephew. So *Jacob* told *Rachel*, that he was her Father's Brother. The wearing of Ear-rings among the richest of the Negroes, is likewise agreeable to the Customs of some of the antient *Jews* and *Carthaginians*: The former we find breaking their Ear-rings to make the molten Calf: and *Plautus*, in his Play called *Pœnulum*, taking notice of some *Carthaginian* Slaves, says, that their Hands should be without Fingers; one would think, because they wore their Rings in their Ears.

(21) When these Negroes die a natural Death, or especially when they destroy themselves, they believe that they shall return to their own Country. It would be too gross to believe, that they expect to be restored and to live there in their mortal Bodies: Therefore we must conclude, that they have some Notion of the Immortality of the Soul; and what they mean by their own Country is, that they shall, after this Life, enjoy the Company of their Friends and Relations in another World.

(22) The Instruments they generally make use of in their Dances, are a Banjou, a Gambay, and a Drum, which they likewise call a Pump. The latter is made of an hollow Trunk of a Tree, about two Feet high, and about a Foot in Diameter, the Dimensions of the Whole, more or less. This is covered

over

a sort of *Pyrrhic*, or a Martial Dance, in which their Bodies are strongly agitated by skipping, leaping, and turning round.

Since I have made this Digression to treat of the Manners and Customs of these Negroes, it may perhaps be expected, that I should consider the several Arguments for and against making our Fellow-creatures Slaves.

But, without engaging in a Controversy foreign to my Design; If we agree with the Civilians of the most polished and learned Nations, ^{Slavery con-} they are of Opinion, that the Power of making Slaves is, and hath ^{sidered.} been, a natural Consequence of Captivity in War. As to the Slavery of these *African* Negroes, this Hardship is not so unsupportable to them; for they are very little better than Slaves in their own Country.

However, I will not presume to determine how defensible this Custom may be under a Christian Dispensation; but thus far may be said, in favour of it, that by the best Accounts we have from the Coast of *Guinea*, antecedent to our purchasing any Slaves, the several different Nations were so very savage and barbarous, that they were at continual Wars with one another, and the greatest Mercy that was shewn to the Conquered was to be put to sudden Death. Hence the Trees along the Sea-Coasts were daily to be seen horribly adorned with the Limbs and Heads of their vanquished Enemies.

Upon the Truth of this Supposition, proved by repeated credible Attestations, that these *African* Nations were, and are, so inexorable to their Captives taken in War, will it not, with the severest Casuist against the Purchase of Slaves, be of some Weight to consider, that if they are bought, and transported into Christian Settlements (without laying any Stress upon taking away by this Means the Guilt of Murder from their Conquerors, or the Benefit that arises to Mankind from their Labour), at least a few, among many Thousands imported, may probably come to a better Knowledge of their Duty to God and Man.

I barely mention this Argument, and leave it to stand or fall by its own Weight: Though to bring these in general to the Knowledge of the Christian Religion, is undoubtedly a great and good Design, in Intention laudable, and in Speculation easy; yet I believe, for Reasons too tedious to be mentioned, that the Difficulties attending it are, and I am afraid ever will be, unsurmountable.

The only Happiness, even in Temporals, that these poor Creatures meet with, is when they fall into the Hands of Masters influenced by the Principles of Humanity, and the Fear of God: By these they are treated (though often their ill Behaviour deserves the contrary) with great Lenity. So true is the Saying of the Poet, in the most literal Sense:

F

---Ingenuas

over with a Goat's or Sheep's Skin. *Isidore*, in his *Origines*, describes the *Symphonia* to be hollow like a Drum, and covered with Leather, which was beaten, or played upon, with a Stick or Quill.

From hence we may conclude, that the last-mentioned Instrument, in Use among our Negroes, hath a great Resemblance, if it is not the same, with the *Symphonia* of the Antients; for this *West-India* Instrument is always played upon with a Stick, or the Fingers.

-----*Ingenuas didicisse fideliter artes
Emollit mores, nec fuit esse feros.*

Ovid. de Ponto, II. 9. 47.

T' imbibe soft Arts, and yield to Learning's Sway,
Soon wears the Edge of Savageness away.

On the other hand, when they are so unfortunate as to have Owners unpolished in their Manners, and insatiable of Riches (who, like the *Egyptian* Tyrants, require Brick without Straw, or, more literally, exact severe Labour from an hungry Belly, or a naked Back), they have scarce a Gleam of Rest from hard Toils, and heavy Stripes, but whilst Sleep, with its short Interval, eludes the painful Scene, which must again be renewed with the returning Dawn.

Such Task-masters (23) consider not, that Compassion to the Miserable is a just Debt; and that this humane Disposition, as *Cicero* justly observes, is not the Institution of worldly Policy, is not the bare Effect of any particular Custom, but the universal Voice of Nature, whose Dictates the Brave, the Generous, and the Good, in every Age, and in every Nation, hear and obey: For, although God suffered the Children of *Israel* to be made Slaves in *Egypt*, till such wholesome Severity recalled them to their Duty; yet he brought Plagues upon the *Egyptians* for their Cruelty and Inhumanity towards them.

The obvious and natural Inference that we may and ought to draw from so many complicated Scenes of Misery, in the Condition of so many Thousands of our Fellow-creatures (who are continually liable to the Insults of the Imperious, and the Lufts of the Debauched, and whose own and their Childrens Childrens incessant Labour will never be at an End, but with their Lives), is gratefully to acknowledge the Happiness of living where neither our Lives nor Fortunes are at the Mercy of any tyrannical Oppressor.

Their Ignorance in Religion compared with some other Nations.

How happy, I say, are we, when compared with the several Nations above-mentioned, whose Ignorance in all Knowledge about Religion is so great, that, in their original native Country, their Adoration is often paid to Crocodiles, Rivers, Snakes, and certain coloured Fowls!

Howsoever ridiculous the Custom of the *Egyptians* may appear in worshipping Beetles and Crocodiles, yet there is some Shadow of Reason, at least of Excuse, to be given for this their Extravagancy; for, as the Passion of Fear is almost universally predominant, as these Beetles came some Years in great and numerous Swarms from *Assyria* into *Egypt*, and almost

(23) It seems by the following Passage from *Horace*, that the Treatment of the *Romans* of their Slaves was not less severe, than that of the present Age; for the Poet, putting *Mena*, *Pompey's* Freed-man, in mind of his former Slavery, describes him thus:

*Ibericis peruste funibus latus,
Et crura dura compede.*

HOR. Epode 4.

almost covered the Face of the whole Land, and, like their kindred Locusts, devoured every green Thing; and as the Crocodiles proved often very destructive to their Herds; the *Egyptians* therefore built Temples and Altars to these, and worshiped them, in Hopes, that either they, or the supposed Deity, who presided over them, would be more propitious, and less hurtful, to them for the future.

It was upon the same Principle that the polite *Romans* deified *Fever*, and dedicated Temples to them. But it is hard to conceive, that there was any Good to be hoped, or Evil be dreaded, from an harmless black Snake, which was one of the Objects of Worship among these Slaves, or from a parti-coloured Fowl, which was never thought by any other Nation to be even ominous, much less to have Qualities that would render it, to a reasonable Creature, the Object of divine Worship.

Here we see the Effect of unassisted Reason; and that it cannot, to the Bulk of Mankind, under such Circumstances, be a sufficient Guide to a reasonable Service towards God.

Indeed, such a Religion is so void of improved Reason, and speculative Thinking, that it surpasseth the grossest Apostasies of the *Jews*, in their Imitation of the *Egyptians*, *Syrians*, and (24) *Phœnicians*, so much complained of by the Prophets *Isaiah* and *Ezekiel*.

From the Disposition and Manners of the Inhabitants, the next Thing that will naturally fall under our Consideration, will be the Nature of the Soil. This chiefly is black, in low deep Lands, in shallower Parts somewhat reddish, on the Hills frequently of a whitish chalky marly Nature, and, near the Sea, generally sandy.

By such Variety, Providence hath wisely adapted different Soils to the different Nature of the several Kinds of Trees, Shrubs, and Plants.

Where

(24) These, among the many Apostasies of the *Israelites*, mentioned by the Prophets, are elegantly described by the great and ingenious Mr. *Milton*, who, speaking of the *Egyptian* and *Syrian* Idols, says,

For those the Race of *Israel* oft forsook
Their living Strength, and unfrequented left
His righteous Altar, bowing lowly down
To bestial Gods; for which their Heads as low
Bow'd down in Battle, sunk before the Spear
Of despicable Foes. With these in Troop
Came *Ashtoreth*, whom the *Phœnicians* call'd
Astarte, Queen of Heav'n, with crescent Horns;
To whose bright Image nightly by the Moon
Sidonian Virgins paid their Vows and Songs:
In *Sion*, also, not unsung, where stood
Her Temple on the offensive Mountain built
By that uxorious King, whose Heart, tho' large,
Beguil'd by fair Idolatresses, fell
To Idols foul. *Thammuz* came next behind:
Whose annual Wound in *Lebanon* allur'd
The *Syrian Damsels* to lament his Fate
In antient Ditties all a Summer's Day;
While smooth *Adonis* from his native Rock
Ran purple to the Sea, suppos'd with Blood
Of *Thammuz* yearly wounded: The Love-Tale
Infects *Sion's Daughters* with like Heat,
Whose wanton Passions in the sacred Porth
Ezekiel saw, when, by the Vision led,
His Eyes survey'd the dark Idolatries
Of alienated *Judah*. ———

Paradise Lost, Lib. I. Ver. 432.

Where the Soil is black, as it imbibes the Rays of the Sun, and reflects few or none, there the circumambient Air is not near so hot as where the Soil is sandy, or gravelly; for most, if not all Bodies, reflect the solar Rays, in proportion to their respective Density and Smoothness; so that by how much the more solid and polished the Particles of a sandy or gravelly Soil are, than black Mould, by so much the more intense will the Heat of their Reflexion be.

It is owing to these reflected Rays, and the Want of Moisture, that the Blades of Canes, as well as other Plants, are more apt to scorch in sandy, or gravelly, than in a black Soil: And, as the Fertility of this, as well as others of the *West-India* Islands, depends upon seasonable Rains, the long Chains of (25) Hills, interspersed with deep Valleys, are therefore providentially situated to the Eastward of some Parts of the Island, to intercept the Clouds and Vapours: For, if the Wind, at East, drives before it even a thin scattered Cloud towards the West, this, as long as it is not augmented by adventitious Exhalations, will hover in the Air; but as soon as it comes opposite to, and as low as these Hills, the impelling Force of the Wind at East, and the Resistance of the now close opposite Hills will compel these thin watry Vehicles to coalesce and associate into Drops; by which means this thick Collection of Water becomes so dense, that its Gravity is greater than the Strength of the Air in that Situation can uphold, and it descends therefore in refreshing Rain; but, when the Collection of Vapours is not so great as to form Clouds, and if these are not raised before the Cold of the Evening above the Height of the Hills and Cliffs, being then destitute of their chiefest Cause of Expansion, I mean the Heat of the Sun, they then are compressed, and descend in soft Mists upon the Earth; yet in far greater Quantity, for the Reasons above-mentioned, upon the Sides of these resisting Hills to the Eastward. It is partly from hence, and not intirely, as some imagine, from the superior Excellency of the Soil, that particular Parts of *St. Joseph's* and *St. Andrew's* Parishes yield a more certain, and often better Increase, than most other Parts of the Island.

This is so remarkably true in general, that it hath been observed, that as long as the Wind blows opposite to one Side of the high Mountains, near the *Ganges*, they have no Rain on the other Side, the Clouds being intirely broken by the Resistance of those very high Hills. And, as the Winds in and near *England* blow near half the Year from the Westward Points, it must follow, that the Clouds and Vapours are, in a great measure, carried that Way: If these, as in *England*, are in their Course intercepted

(25) That a long Chain of Hills is very serviceable to intercept the Clouds and Vapours, was known as early as the Time of *Moses*; for, in his Description of the Land of *Canaan*, he says to the Children of *Israel*, *The Land whither thou goest in to possess it, is not as the Land of Egypt, from whence ye came out, where thou wateredst thy Seed with thy Foot, as a Garden of Herbs; i. e. In Egypt (as the learned Dr. Shaw, in his Travels, observes) the Egyptians, for want of seasonable Rains, were obliged to water their Grounds by artificial Canals, which received the Waters upon the Overflowing of the Nile. But the Land whither ye go to possess it, is a Land of Hills and Valleys, and drinketh Water of the Rain of Heaven; a Land which the Lord thy God careth for: The Eyes of the Lord thy God are always upon it from the Beginning of the Year even unto the End of the Year.* Deut. xi. 10, 11, 12.

cepted by high Hills, they become more dense, and consequently break into Rain or Mist. If they meet with little or no Resistance, many of these thin scattering Clouds pass over an open champaign Country. It is, I believe, owing to this chiefly, that *Picardy in France* is less supplied with Moisture, and consequently wants that grateful Verdure so remarkable in *England*.

That these Hills are serviceable in stopping the flying Clouds from passing over the Island, is what is daily confirmed by Experience; for that Part of the Island called *The Thickets*, in *St. Philip's Parish*, being low Land, and having no Hills, nor high Cliffs to the Eastward, to make any Resistance to these Clouds, is often scorched with great Drought, when the middle and more hilly Parts of the Island are replenished with Rain.

High Lands
serviceable
to intercept
Clouds.

It must not from hence be concluded, that such Countries are intirely destitute of Rain, because they have no Hills or Cliffs to the Eastward. I mention these only as Helps, to prevent some low Clouds and Vapours from passing over them; for, if the general Cause of the Descent of Rain was the Resistance made by the Hills and Mountains, there would be little or no Rain at a great Distance from Land, which we are sure there is.

It will likewise perhaps be surprising to those unacquainted with the Nature of the Soil of some Parts of this Island, to hear, that in the most hilly, which is called *Scotland*, considerable Quantities of Land should run away (as it is here termed), and become Part of a neighbouring Estate.

Sometimes large Pieces of Ground planted with Canes, and even Land with Plantain and Banana Trees growing upon it, have slid down to the Valleys from the Sides of the Hills. This happens in very rainy Seasons; for, as the Soil upon these Hills is commonly not above Eight or Nine Inches deep, and of an oozy and soapy Nature underneath, it easily separates from the next immediate *Substratum*, which is of a slippery Chalk, flat Stones, or loose Gravel.

The Soil in
rainy Sea-
sons often
slides from
the Sides of
the Hills to
the Valleys
below.

When the Soil slides in large Pieces, its Motion is less violent, than when it is confined in narrow Chasms in the Meeting of two Hills, especially if the Situation be very steep; for there the Collection of Water being considerable and heavy, instead of gliding softly between the two *Strata*, it breaks out in different Places at once, and then runs down the Precipice a mingled Torrent of Earth and Water.

A remarkable Instance of this kind happened some Years ago in *St. Andrew's Parish*, where a large Garden, the Soil of a Potato-Garden, with its growing Produce, slid from the Side of a neighbouring Hill, and richly covered the next Neighbour's Land, situated in the Vale below.

Another Instance, similar to this, happened at an Estate, now in the Possession of the Reverend Mr. *Reynold Foster*, where the greatest Part of a poor Tenant's Land, with all its Produce growing upon it, first cracked, and then slid over the Cliffs into the Sea; but during the long Continuance of the same Rain, in a few Hours afterwards, the adjoining Land of

Mr. *Foster*, being then planted with Canes, came tumbling down, and richly supplied the Place of the Soil so lately washed off, and there remained.

The Violence with which the Land moves at such times, may be guessed at likewise from the following Instance: A Cabbage-tree of about Thirty Feet high, moved Roots, Soil, and all, several Feet from the Place where it grew; it moved in an upright Posture, and remained so upon the Settlement of the Soil, and continues to this Day to grow and flourish. This Tree is to be seen at *Banana Hole*, an Estate in *St. Joseph's* Parish, belonging to Mrs. *Warren*, at the *Black Rock*.

However fertile these hot Climates are, if refreshed with seasonable Dews and Rains, and with the warm enlivening Rays of the Sun; yet it will scarce appear credible, at least to the Northern Inhabitants of the World (where the Vegetable Creation languishes for near half the Year; and, when the Sun sheds its benign Influence, is comparatively weak and faint), that in an Island, containing not above 106470 Acres of Land, there should ever have been near 70,000 black, and 30,000 white Inhabitants; though at this Time, indeed, as I have observed before, the Number is not quite so considerable.

The great
Fertility of
the Land.

What I shall add will still appear more incredible (though upon good Grounds I affirm it); That if all the Valleys, and other Places shaded from the Wind, were to be planted with Plantain, Banana, and Cassado Trees, and the open level Land with Yams, Potatoes, Eddoes, Corn and Pulse (especially Pigeon-peas), and a sufficient Number of Cattle was kept to provide Manure, this small Island alone, without any foreign Assistance, would, in seasonable Years, produce a Sufficiency of such Food to maintain more than the (26) Number of its present Inhabitants.

The numerous
Armies of the
Children of
Israel not
incredible.

From hence we may learn not to wonder at, nor disbelieve what is said in Scripture of the Fertility of the *Holy Land*, and the numerous Armies brought into the Field by the Children of *Israel*. Though their settled Kingdom from *Dan* to *Kadesh*, upon the Northern Boundaries of *Arabia Petraea*, was not above One hundred and Twenty Miles long, and in Breadth, from

(26) *Romulus* allowed every *Roman* but Two Acres of Land (which were much less than the *English* Measure) in even a Winter Country. How much more fruitful an Acre in this Island is, than Two about *Rome*, will appear by the following Calculation: An Acre of Land designed for Yams hath generally three thousand one hundred Holes dug in it. This planted in the Beginning of *July*, with Five hundred Weight of small Yams, will come to their Maturity, and be fit to be dug up the latter End of *December*, or the Beginning of *January*, and will yield Two Pounds and Three Quarters Weight of Yams from every Hole. This is a Computation so very small, that the Inhabitants often dig Four, Five, or Six Pounds, more than what I have mentioned: However, by this very low Calculation, an Acre thus planted (besides the small Yams or Seedlings, equalling the Weight of what was planted) will produce a Sufficiency for Five Men a whole Year, allowing each Man Four Pounds of this kind of Food a Day; so that Twenty-seven thousand Acres of the present best Cane Land, planted in Yams, would produce yearly a Sufficiency of this kind, at the above Allowance, for One hundred and Thirty thousand Men, which is above the Number of its present Inhabitants. After the above-mentioned Quantity is subtracted from the Whole, there will remain Seventy-nine thousand Four hundred Acres, which (except what the Buildings, Orchards, and other Conveniences take up) may be planted, some in Corn and Pulse, and the rest left for Pasturage, which Quantity will be more than sufficient to raise Cattle for Manure, and other Uses: Besides, there might be raised upon the most barren Part a great Number of Sheep and Goats; and the whole Land, that was planted in Yams, would be open for other Provisions, such as Potatoes and Pulse, for above Six Months in the Year.

from the *Mediterranean Sea* to the Desert on the East, about Eighty ; yet, when *Joab* numbered the Children of *Israel*, they were found to be Thirteen hundred thousand fighting Men, besides Women and Children.

The great Fertility, and prodigious Growth, of Vegetables in warm Climates, when compared with the Northern Parts of the World, is almost incredible ; at least, it will appear to be so to those who are unacquainted with the Nature of Vegetation.

This will be made more evident, when we come to describe the Plantain-tree, and the great *American Aloe* ; nor will it be less agreeably surprising to find, that these hot Climates are far from being uninhabitable ; for the Heat is daily cooled by the constant Breezes of Wind, which at the Sun's first Rising gently fan the Air, and increase in Strength in proportion to the active Influence of the Sun's Heat, till towards Evening, when the solar Heat is abated, these refreshing Gales, generally speaking, die away.

The Constancy, Regularity, and Gentleness of the Wind, especially in what we call the Winter Months, the Serenity and Clearness of the Air, the continued Verdure of Trees, diversified with Variety of Objects of Art and Nature, all terminating in and surrounded with the Sea, may be compared, with some small Allowance, to *Homer's* beautiful Description of the Plains of *Memphis*, near the *Acherusian Lake*.

Οὐ νικητός, ὅτ' ὅρ' χειμῶν πάλως, ἐπέ τοι ὄμαρ.
Ἄλλ' αἰεὶ Ζεφύροιο λίσυανέοντος ἀήτας
Ὀκεανὸς ἀνίστη ἀναφύχειν ἀνθρώπους.

*Stern Winter smiles on that auspicious Clime :
The Fields are florid with unfading Prime.
From the bleak Pole no Winds inclement blow ;
Mold the round Hail, nor flake the fleecy Snow :
But from the breezy Deep the Blest inhale
The fragrant Murmurs of the Western Gale.*

POPE.

The beautiful Prospects from several Hills to the Vales below, especially from the Top of a small Hill, near the Honourable *John Dottin's* Estate, from another in *Batten's* Estate, and from *Brigs's* Hill, are not perhaps inferior to that so celebrated Prospect from the Top of *Mount Tabor* towards the spacious Valley of *Esdraelon*, and the *Mediterranean Sea*.

Nor ought we here to neglect the Description of *Hackleton's Clift*, where Nature at one View displays a great Variety of surprising Prospects. Here the high impending Rocks yield a dreary rueful Appearance : The several deep Chasms below, over which they project, are imbrowned with the thick Foliage of lofty Trees. The adjacent steep Declivity is crouded with irregular Precipices, and broken Rocks ; the whole View terminating in the tempestuous Sea, over whose craggy Shores the foaming Waves incessantly break.---All solemnly awful, if not horrifying Scenes ! except when the Eye is relieved by a Glimpse, or sometimes a full Sight, of the neighbouring

neighbouring Plantations. To complete this uncommon Contrast, a deep rapid River runs through the Valleys at the Bottom of these Precipices; which, tho' in the dry Seasons it is almost without Water; yet in the rainy Months of *June, July, and August*, it often overflows its highest Banks; and its then irresistible Course may justly be said to answer *Horace's* Description of the River *Tiber* in a Storm.

----- *Cætera Fluminis*
Ritu feruntur, nunc medio alveo
Cum pace delabentis Etruscum
In mare; nunc lapides adefos,
Stirpesq; raptas, & pecus, & domos
Volventis una, non sine montium
Clamore, vicinaeq; flæ,
Cum fera diluvies quietos
Irritat amnes.

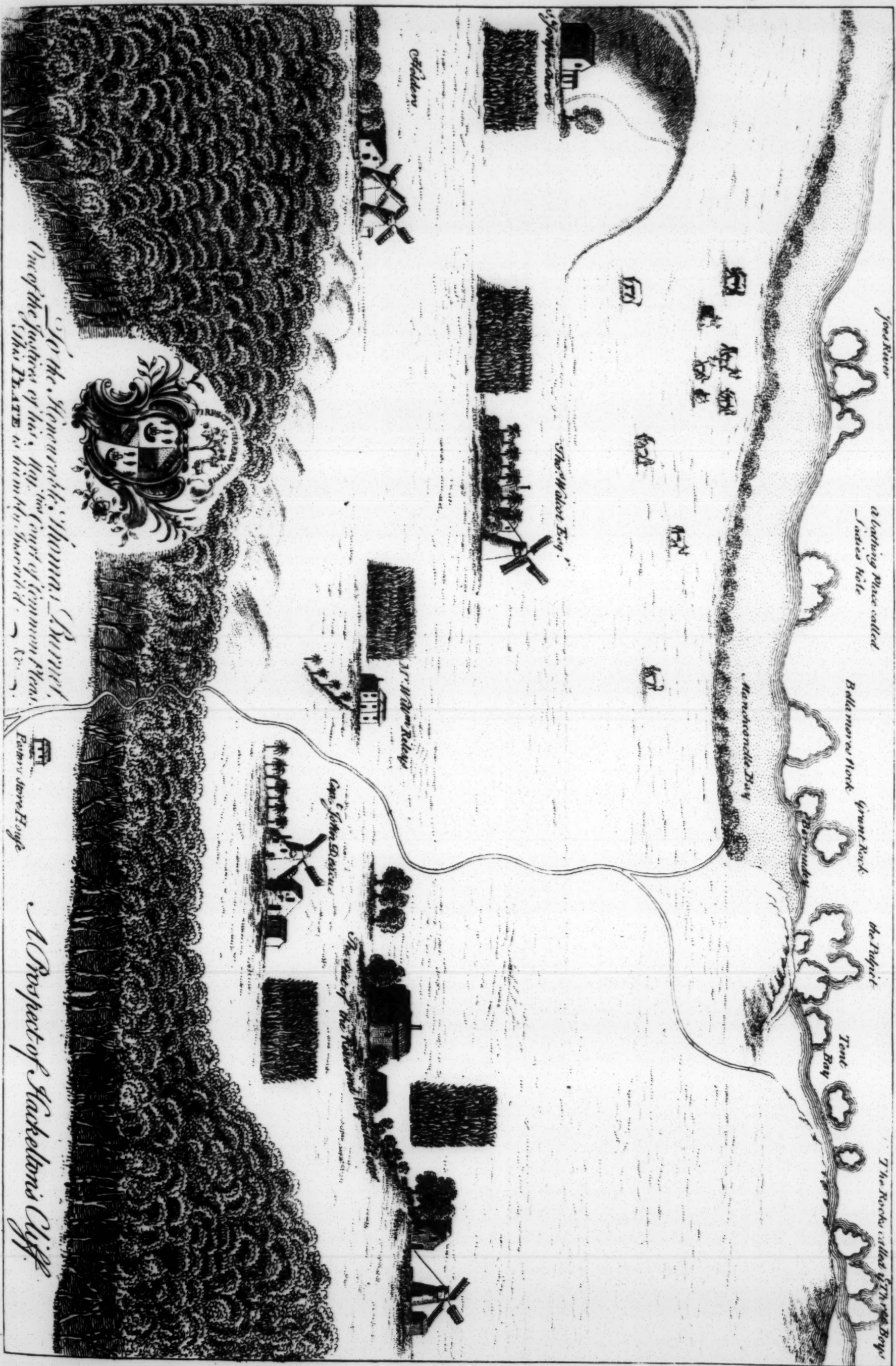
Like *Tiber's* smooth and glassy Face,
 When gently rolling to the Main;
 Life sometimes glides with a soft Pace,
 Unvanquish'd with the Edge of Pain.
 Like *Tiber*, oft 'tis in a Roar,
 When his rough Billows lash the Shore;
 Rocks, Trees, and Cattle, down are borne,
 And Domes from their Foundation torn;
 Huge Mountains sound, as well as Woods;
 And all around the Plains are Floods.

As the above-mentioned stupendous Cliffs are intirely impassable for many Miles, except by Three narrow Chasms hewed through the Rocks, where Ten Men can resist a Hundred; this, with their Vicinity to the Sea, reminds me of *Mr. Glover's* beautiful Description of the Streights of *Thermopylae*.

----- *There the lofty Cliffs*
Of woody Oeta overlook the Pass;
And far beyond, o'er half the Surge below,
Their horrid Umbrage cast. ----- LEONIDAS.

This Place is still more melancholy, if we cast our Eyes upon the several Catacombs, which on our first Settlement in this Island were dug out of the Rocks in the Side of this Cliff, where lie the Remains of those, who, like the Patriarchs of old, procured to themselves Places of Rest.

The Antients, especially *Aristotle*, were of Opinion, that the Torrid Zone was uninhabitable, by reason of its supposed great Heat; but when we consider the almost constant Regularity of the Trade-Winds and



and Weather, and the quick Return of Night, with its moist Vapours, we cannot be at a Loss to conceive how these otherwise hot and sultry Regions, near the Equator, are by this Means rendered not only habitable, but pleasant; and, as the Inhabitants are not liable to sudden Changes from Heat to Cold, they not only enjoy a great Share of Health, but likewise live to an advanced old Age.

There are now alive (and most of them in a tolerable good State of Health) within Three Miles round, in a Country-place, Part in *St. Lucy's* Parish, and Part in *St. Peter's*, Eleven Women, and One Man, whose Age, added together, make a Thousand and Five Years. We have likewise, in the Island, Three Persons, whose Ages, being added together, amount, by the best Computation that can be made, to near Three hundred Years.

The Island proved to be healthy from the Longevity of some of the Inhabitants.

Piso, in his Account of *Brasil*, says, that several of the Natives there live, some to an Hundred, others to an Hundred and Fifty Years: Yet I beg Leave to dissent, with regard to the Certainty of it, from that great Man, however a Man of Veracity in other respects; for neither the *Indians* upon the Continent of *America* (at least the different Nations that I knew), nor the native Negroes of *Africa* (as far as I could learn by the most strict Inquiry from such of them as have been naturalized in these Colonies), have any certain Method of reckoning their Years; nor of the latter is there one of an Hundred that can give you any tolerable room to guess at their Age, unless something very remarkable happened when they were young, to leave a lasting Impression upon their Minds.

When I examined a very old Person about her Age, all that she could remember was, that she was a very lusty Girl when the great Hurricane happened.

This indeed was an *Æra* remarkable enough; for of all Storms called Hurricanes, which, in Truth, are inexpressibly violent (though not so frequent in their Returns here, as it is imagined in *Europe*), that which happened in *Barbados*, on the 31st of *August* 1675. was not inferior, in its deplorable Consequence, to the Earthquake which happened at *Jamaica* (27); for it left neither House nor Tree standing, except the few that were sheltered by some neighbouring Hill or Cliff.

Hurricanes, their Force and Effect.

Some Hours before the Storm began, the Heaven was overcast with thick Clouds, of a black reddish Hue; the Air calm, but sultry; and the more it lost its expansive Force (which before buoyed up the watry Particles in a dispersed State), the closer the Clouds condensed, and the blacker they appeared.

H

The

(27) In the terrible Earthquake at *Jamaica*, which happened on the 7th of *June* 1692. the Sand in the Streets moved in Heaps, like the Waves of the Sea; then on a sudden the Earth opened in several Places, and swallowed in whole Rows of Houses with their Inhabitants. The remaining few knew not whither to fly; for Destruction was on every Side. As the Earth opened and closed with a very quick Motion, several Hundreds of the Inhabitants were absorbed alive; others jammed in the close Fissures, some up to their Necks, some to their Waists; and others had their Legs and Thighs broken in these Yawnings of the Earth, which were so numerous, that a Gentleman reckoned above Two hundred open in a very short time. The Sea was in such strong convulsive Motions, that in almost an Instant it receded back near a Mile, and as quick returned to its former Bounds. A large Mountain, not far from *Port Morant*, was quite swallowed up, and the Place where it stood is now become a large Lake of about Four Leagues over. *Vide Phil. Trans. Vol. II. p. 411.*

The Afternoon, when the Violence of the Storm began, the Wind was high and varying, almost in an Instant, to every (28) Point of the Compass; but settled chiefly at North, being attended with dreadful Rain, Thunder, and Lightning.

The Sea, where not guarded with high Cliffs, overflowed its Banks, in some Places, above an Hundred Yards.

The Day-light, while it lasted, as *Milton* expresses it,

Serv'd only to discover Sights of Woe;

for there was nothing to be seen but one rueful Spectacle of almost universal Ruin.

If one looked in to the Land, *Behold, Darknefs, and Sorrow, and the Light was darkened in the Heavens thereof.*

The Night, as it came on, was ushered in with an almost continued rumbling Noise in the Air, with the Increase of Wind, Rain, Thunder, and Lightning; especially the latter, which now with redoubled Force, darted not with its usual short-lived Flashes, but in rapid Flames, skimming over the Surface of the Earth, as well as mounting to the upper Regions.

The next (29) Morning, when the Storm was abated, the whole Island afforded a lively, but terrible, Idea of the Tenth *Egyptian* Plague of old; for there was scarce a House but lamented one dead in it, or in general something equal, or worse.

Several Families were intirely buried in the Ruins of their Houses; and there were few that escaped, but with the Loss either of some Relation, Friend, or Acquaintance.

These,

(28) There was not an House left in *Speights Town*, whose Roof was not blown off. Major *Streate* lived above the Town, at an Estate, now in the Possession of Mr. *Andrew Derry*, whose Roof being first blowed off, the Violence of the Wind was so great, that he and his Bride, up one Pair of Stairs (being married but that Evening), were carried from their Bed by the Force of the Wind, and thrown into a prickly Pimploe-Hedge; in which uncomfortable Situation, they were both found next Morning, unable to assist themselves. Likewise one *Humphry Waterman*, then an Infant, was found as soon as the Storm was over, with his Arm broken, and in that Condition sucking his dead Mother, killed by the Lightning or Storm.

There are many Instances that might be given of the great and destructive Force of Storms; especially that which happened in the Reign of *Cambyfes*, which was so violent, that it raised the Sand in the Desert between *Egypt* and *Ethiopia*, so as to cover and destroy a whole Army, consisting of Fifty thousand Men, which were intended against the *Ethiopians*.

In the above-mentioned Hurricane in this Island, there were Seventeen Persons killed in one House, in that Part of the Island called *Scotland*. I have these Informations from creditable Persons now alive in the Island, and who were, at the time of the Hurricane, of sufficient Age both to remember, and make their Remarks on, the Violence of the Storm, and the Occurrences that then happened.

(29) It is here reported, that, during this Hurricane, one Mrs. *Groome*, a Midwife, in *St. Philip's* Parish, living upon the Estate of Mr. *Thomas Hardin*, endeavouring to go from her Dwelling to an Out-house, was snatched up by a Whirlwind, and carried through the Air to a great Distance from Home, where she was found many Hours afterwards grasping the Roots of a large Tree newly blown up.

Those here, who believe this Relation, urge, in favour of their Belief, that there are many well-attested Instances of as great Storms, which have been frequent at *Rome*, at *Capua*, at *Lavinium*, and several other Places of *Italy*. See *Diodorus Siculus*, Vol. III. Lib. XII.

However, I leave the Reader at Liberty to judge for himself, whether such an Instance is consistent with Probability, and whether any similar Instances, from good Authority, be brought to countenance, if not confirm it?

These, and such-like Storms, when compared with the most remarkable ones, described by Heathen Authors, either in Prose or Verse (30), are infinitely more surprising and dreadful; for, when the Almighty, in these terrible Visitations, *rideth upon the Wings of the Winds*, when he *maketh the Darknefs his Pavilion*, then it may be said without a Figure, that he *taketh up the Mountains in a Balance*, and *the great Deep as the Drops of a Bucket*: Not the Tops of *Rhodope*, or the *Ceraunian Hills*, alone are torn; it is not these alone that skip like Lambs, nor is it the River *Jordan* only that flies back, but Hills upon Hills sink into Valleys, and the Bottom of the great Deep uncovers, and starts into Land, at his angry Nod. The Foundations of the Earth shake, and the Pillars of Heaven are astonished, at his Rebuke. *Lo! these are but Part of his Ways. How little a Portion is heard of him!*

The sudden shifting of the Wind, in these and such-like Hurricanes, to the several Points of the Compass, may be justly compared to *Virgil's* beautiful Description of a Storm, in the following Words:

----- *Ac venti, velut agmine facto,
Qua data porta, ruunt, & terras turbine perflant.
Incubere mari, totumq; a sedibus imis
Una Eurvsq; Notusq; ruunt, creberq; procellis
Africus; & vastos volvunt ad littora fluctus.* Æn. I. 86.

The huddled and tumultuous Band of Winds
Sweeps o'er the Earth, and a wide Portal finds:
Then broods upon the Deep; and in their Turns
South, East, and West, with eddyng Fury burns: They

(30) As the most celebrated Description of a Storm is that of *Virgil's*, it will not perhaps be improper to insert it in his own Words: G. I. 322.

*Sæpe etiam immensum cælo venit agmen aquarum,
Et sædam glomerant tempestatem imbris atris
Collectæ ex alto nubes: ruit arduus æther,
Et pluviam ingenti sata læta, boumq; labores
Diluit: implentur fossæ, & cava flumina crescunt
Cum sonitu, fervetq; fretis spirantibus æquor.
Ipse Pater, media nimborum in nocte, corusca
Fulmina molitur dextra; quo maxima motu
Terra tremis; fugere feræ, & mortalia corda
Per gentes humilis stravit pavor: Ille flagranti
Aut Atho, aut Rhodopen, aut alta Ceraunia telo
Dejicit: ingeminant Austri, & densissimus imber:
Nunc nemora ingenti vento, nunc littora plangunt.*

Of from above descend a Troop of Floods:
Of gather from the Deep the thick'ning Clouds;
Down rush the Skies, and with impetuous Rain
Wash out the Ox's Toil, and sweep away the Grain.
The Dikes are fill'd; no Bounds the Torrent keep;
And with the breathing Surges boils the Deep.
Amidst a Night of Clouds, his glitt'ring Fire,
And rattling Thunder, hurls th'eternal Sire.
Far shakes the Earth; Beasts fly; and mortal Hearts
Pale Fear dejects: He, with refulgent Darts,
Or *Rhodope*, or *Atho's* lofty Crown,
Or steep *Ceraunia's* Cliffs, strikes headlong down.
The Rains condense; more furious *Auster* roars:
Now with vast Winds the Woods, now lashes he the Shores.

They rouse the lowest Waves, that slept before,
And heave huge Billows tow'ards the lab'ring Shore.

As these quick Transitions of the Wind to the several cardinal Points, is a notorious Matter of Fact, with respect to Hurricanes, how inexcusable must those be, who, without any Inquiry, ridicule the Description of a Storm in the Book of *Job*; because the Author makes the Storm to affect the Four Corners of the House, as if it were at once! which indeed is no less a true, than an elegant Description, of such a Storm.

It is observed, that the Glare of Lightnings is, in general, more expanded in these hot, than in Northern Climates. This is undoubtedly occasioned by the greater Rarefaction of the Air near the Equator. However, in Times of violent Hurricanes (if of any long Continuance), the Rapidity of the Wind and Rain presses on, and forces a prodigious Quantity of heavy Air in the room of the more rarefied, which is obliged to fly upwards, and to give way: Then the Atmosphere becomes as much condensed, during the Storm, as in any Northern Climate: And therefore the Lightning, being more closely pressed by so thick a Medium, would appear, and in reality be, more compact, than when less resisted by the common more rarefied Air. It is chiefly owing to this, with a small Allowance for the Consternation and Fear that the Inhabitants were then possessed with, that we can in some measure reasonably account for their describing the then Lightnings to be so very uncommon to them, as to appear like so many Wedges or Bolts of Fire in the Air.

I am of Opinion, that all Hurricanes begin in variable Climates; otherwise we should not in all Probability have here any such Storms at all; for as the Air is very much rarefied near the Equator, its Particles are at a great Distance from one another, and consequently act with a less Force and Struggle, than when nearly compressed between a thicker Medium. This (*cæteris paribus*) may be evidently seen by the great Power of Air pent up in a Wind-Gun, which will force Leaden Bullets through an Half-inch Deal-board; so that where-ever the Particles of Air are most compressed together, there the greater will their Struggle be to expand, or dilate. Hence all such variable Climates will be more liable to Storms. We may likewise add, that the nearer any of our *West-India* Islands is to the main Land, whose Mountains near the Shore are very high, if the Storm blows upon the Island from the opposite Point; for Instance, If it comes from the North-east; and the adjacent Continent, opposite to that Point, rises with very high Lands (the Storm meeting with this Resistance, and being still violently pressed against the Sides of these Hills); the remaining Particles of rarefied Air will, according to their Nature, mount upward, leaving the lowermost still more condensed; and as every Particle of Air hath an elastic Quality, the greater the Number is of these that are compressed together, their united Force will

will with greater Power recoil ; so that the Storm, being thus stopped in its Course, will more violently blow, as well as last longer.

Some slight Earthquakes have been likewise felt in this Island ; but probably not so much here as in the neighbouring Islands of *St. Vincent's* and *St. Lucy's*, where there are burning Mountains, that have at times vomited Fire (tho' not of late Years) ; and where there is a great Quantity of crude Brimstone to be found in the Neighbourhood of their Volcano's. The Hurricanes are much less frequent of late Years ; nor hath there appeared any thing like one in this Island, since the Year (31) 1731. which blew from the East and North-east.

All the Ships were driven out of the Harbour ; but there was not much Damage received, except on Shore, where several Houses were thrown down, and some large Trees torn up by the Roots.

From these loud ones, let us take a View of the more silent Strokes of the Almighty's Hand, whereby he nevertheless asserts his Kingdom over all the World, I mean the Diseases peculiar to this and some neighbouring Islands.

(31) The Violence of this Storm was such, that it covered, near *Bridge Town*, a Shoal at a small Distance from the Land, opposite to Colonel *Hilary Rowe's* and Mr. *Waldron's* Houses, of near Two hundred Yards long, Twenty broad, with a Bank of Stones Four Feet thick: These adventitious Stones have been since partly washed off by high Tides, and partly carried away for Ballast, or to be burnt into Lime by the Inhabitants.

The End of the FIRST BOOK.



A Prospect of Bridgetown in the Island of Barbadoes.



THE
NATURAL HISTORY
OF THE
Island of *BARBADOES*.

BOOK II.

Of the Diseases peculiar to this and the neighbouring Islands.

IT is the Opinion of many great Men, that the Almighty never shews his Power by inflicting Diseases, or even great Inconveniencies, peculiar to any certain Part of the World, but at the same time he displays forth his Goodness, in providing some extraordinary Remedies. If *Egypt* is often denied refreshing (1) Rains, its Dews descend not only, like those of *Hermon*, upon the thirsty Plains, but the wide-extended *Nile* also is commanded more plenteously to supply that Blessing from his copious Urn. When he hath thus fertilized the Earth, his Waters recede within their former Bounds, and return not again till the stated Periods, to cover the Land; so that if this Part of the World is sometimes visited with Fevers far more acute than any known in the Northern Parts (the Plague excepted), I make no doubt but indulgent Providence

(1) This must be understood chiefly of *Upper Egypt*.

Providence hath provided Plants, Minerals, &c. in the same Climate, which, upon a thorough Search into their Qualities, are capable of affording not only great Relief, but also most effectual and specific Remedies.

That they are not already found, is rather an Argument, that we have not been sufficiently inquisitive, than that there are no such Plants endued with these Virtues.

The Heat of
the Climates
sublimates
the Juices
of Plants.

The several Discoveries that have enriched the *Materia Medica* plainly shew, that the Virtues of Plants and Minerals are inexhaustible. And we may likewise observe, that the Heat of the Sun in these hot Climates is so intense (especially upon those Plants which grow sheltered from the Wind), that it sublimates their Juices, Salts, and Spirits, to a far greater Degree of Perfection, than a chemical Fire, by its inconstant Heat, can possibly effect.

Hence it is, that the most valuable Gums and Balsams are brought from hot Climates. Witness that of *Gilead* and *Peru*.

It is observed by the ablest Practitioners in Physic of this Island, that Peripneumonies and Pleurifies are almost the constant Attendants of the Change of Wind, if of any Continuance, from the true Trade-Wind, especially to a sultry South-west Wind.

The Difference of Purity between this and our Trade-Wind, is easily discovered; for the South-west Wind blows from a very hot moist Part of the Continent of *America*, which is not above 254 Miles distant from this Island: And as this is by far hotter than our usual Air, it adds too great a Relaxation to the Animal System.

The Trade-
Winds con-
stitutional
to the Inha-
bitants.

This, with the different Degrees of Circulation in all the Juices (which such a Difference in the Air must cause), gives Birth to various Diseases: Whereas the Trade-Wind, by its Frequency, or rather by its Constancy, is not only constitutional to the Inhabitants, but it is in itself purer than the other, because it blows upon the Island at East-north-east; and as the nearest Part of the Continent, upon that Point, is 3127 Miles from us, the Air must be far colder by passing over so much more Water, than the South-west Wind, and consequently more wholesome.

The learned Dr. *Mead*, in his Treatise *de Peste*, observes, that it was the Opinion of *Hippocrates*, that the Constitution of the Air that preceded pestilential Fevers, was mixed with great Heats, much Rains, and Southerly Winds. And *Galen* takes notice, "that no other than a moist Air brings the Plague." *Lucretius* is of the same Opinion, in his admirable Description of the Plague of *Athens*. "These Diseases, says he, either come from the Air, or rise from the Earth."

- - - - *Ubi putrorem humida nacta est,
Intempestivis pluviisq; & solibus icta.*

LUCRET. Lib. VI. Ver. 1098.

In or about the Year 1741. a great Number of Dogs ran mad ; and I observed, that the Temperament of the Air, for many Months before, was very hot. In this Season, a great Number of Cattle, being bit by these Dogs, ran mad likewise.

I cannot here omit inserting a very lucky unexpected Cure of a mad Cow, belonging to *Hurdiss Jordan*, Esq; in *St. Lucy's* Parish. When found to be mad, she was confined ; but as the usual Symptoms, attending that terrible Distemper, appeared more and more, and she growing to extreme Madness, the Owner determined to destroy her ; but as she was a favourite Beast, her Doom was respited till he had tried the following Experiment.

Having thrown her down upon a Dunghil, he directed his Slaves to keep, by Force, her Mouth open, whilst he poured by Degrees down her Throat a large Pailful of cold Water. In a short time after, she began to feed, and in about Twenty-four Hours drank Water as usual, fully recovered, and remained so.

As this is a Matter of Fact, sufficiently attested by that Gentleman, and his Family, I make no Apology for inserting it : Indeed I should have been inexcusable, if I had omitted so extraordinary and surprising a Circumstance ; for who knows but indulgent Providence may at last point out some Remedy against so dreadful a Calamity, and that the same Method may be of Service towards the Cure of the human Species ?

It appears to me, at least, probable ; for even Nature, in Instances not intirely dissimilar, points out something like this : Thus, when the Stomach is overloaded, it generally makes many Efforts to relieve itself by Vomits, which, when assisted by Art, prove often an effectual Remedy : And as we find, that the miserable Patient, when afflicted with this Disorder, hath an ardent Desire of Water, though the Nature of the Distemper is such, that it will not permit him to drink ; therefore, if, in this Case, a considerable Quantity of Water were forcibly poured down his Throat, perhaps it would be of great Service ; for as the Poison is of a very hot Nature, which appears by the violent Thirst it causes, it is more than probable, that such a Quantity of cold Water, mixing with the *Virus*, would, at least, abate its Force, till Sudorifics, or other Medicines, had time to expel and throw off the Poison by Perspiration, or otherwise : That some Poisons, of an hot Nature, act less vigorously in Cold, than when assisted with Heat, is evident, from the more dangerous Consequence of the Bite of Scorpions and Vipers in *Italy*, and elsewhere, in an hot Summer Season, than in moderate cold Weather.

As the *English* Physicians are no less remarkable for their Humanity, than Skill and Judgment, it is to be wished, that these ingenious Gentlemen would (in Pity even to the dumb Creation, as well as to their Fellow-Creatures) try this Experiment first on Beasts ; which if successful, it might likewise be of Service to the human Species, under such deplorable Circumstances.

From this seeming Digression, let us return to observe, that the Dry Belly-ach (so called from its affecting that Part of the Body with great Costiveness and Pain) was formerly much more frequent and fatal, than it hath been of late. Distillers of Rum, and Boilers of Sugar, and Overseers, were chiefly subject to it; the first (who are generally of the poorer Sort), from immoderately drinking new hot Rum; the second and third, from taking Cold, after sweating in hot Boiling-houses, and drinking very strong Punch, or almost as strong (2) Cowow, or (3) Mobby.

This Distemper is likewise said to arise from Grief and Trouble of Mind; and sometimes it hath been thought to be epidemical.

The Belly-ach, its Symptoms.

After it hath for some Days afflicted the Patient with intolerable Pains in the Belly, Costiveness, with voiding little Urine, and that like Mum, the Breath stinking very offensively, the Pains are frequently translated to the Limbs, attended sometimes with an intolerable Pricking and Burning in the Feet; at other times, great Pains in the Stomach arise; and then the Patient hath Epileptic Fits, which often relieve the Pains, but weaken and impair the Use of the Limbs.

When the Disease becomes inveterate, the Patients grow hoarse, and lose their Voice, coveting Anodynes, and strong Drink, to that Degree, that the common Rum is much too weak; and they drink even *Hungary Water*, or put red Pepper into Rum, to augment its Heat. When they lose the Use of their Limbs, they commonly have profuse Sweats.

The former Method of Cure.

The Method of Cure formerly was to purge the Patients both with Cathartics and Clysters: From this Practice the unhappy Creatures were subject to lose the Use of their Limbs.

However, this prevailed until about the Year 1700. or somewhat before, when the Physicians began to make use of Anodynes with better Success; which hath been their Way of proceeding ever since.

The present Method of Cure.

Their present Method of Cure is universally followed, being both safe and easy, and the Patients run no Danger of either Life or Limbs: For, as soon as Dr. *Warren* found, that it was a convulsive Constriction, chiefly in the Ilium, he judged, that Purges and sharp Clysters must be attended with bad Success, and Emetics, at least, useless, if not hurtful; from whence he concluded, that Anodynes mixed with Antihysterics would be the likeliest Means of Relief: He therefore pursued that Method, as necessary to be followed, for a few Days, till the Pains of the Belly intirely ceased for the Space of Twenty-four Hours: Then he concluded, that the spasmodic Constrictions were over; at which time he ordered some emollient Clyster, and then gave a gentle Purge of some of the bitter Pills, which generally perfected the Cure, only taking some Anodyne for a few Nights successively afterwards.

Dr. Warren's Method of Cure.

The bitter Pills are thought properest, because the Bile in this Distemper shews itself to be deficient in its due Secretion, or its Quality.

There

(2) A Drink made with the Scummings of the boiled Cane Juice, mixed with Water, and fermented; and then drank.

(3) Mobby is a Drink made with pounded Potatoes, and Water fermented with Sugar or Molasses.

There are other Kinds of Colics, which often afflict the Inhabitants ; likewise the Yellow-Jaundice, and Hysterical Disorders : But as these are not peculiar to this Climate alone, it cannot be expected, that I should enter so far into the Province of the Physician, as to treat medically of them.

As Diarrhoeas, however, and Dysenteries, make no small Havock among the poorer Inhabitants of the Island ; and as the Cause and Method of Cure, in some measure, differ from the same Distemper in Northern Climates, being partly constitutional ; they deserve to be mentioned : Nor can this be better done, than in the Words of Dr. Towne.

Fluxes are very common in the *West-Indies*, but more especially in rainy Seasons ; and may be imputed chiefly to the Negligence of those who either too unwarily or unavoidably expose themselves to the Injuries of the wet Weather ; by which means Perspiration being interrupted, the thin Part of the Blood, which should have been exhaled through the Pores of the Skin, is thrown upon the Bowels, and thence discharged in loose Stools. This plainly appears from the great Number of Negroes, and the poorer Sort of White People, who in these Seasons are much more afflicted with this Distemper, than such whose Conduct of Life does not subject them to the like Inconveniencies.

Fluxes very
common in
rainy Sea-
sons.

Besides catching Cold, there are other antecedent Causes of a Diarrhoea ; the principal of which are, “ An immoderate Use of crude fugacious Fruits, “ unwholesome Food, and Meats of difficult Digestion ; all which, by stimulating the Guts, will likewise occasion a Diarrhoea.

“ When these last-mentioned Causes occur, with a damp rainy Season, “ the Bowels will not only be loaded with the thin Juices, which ought “ to pass off by Perspiration, but they will also, by reason of the Stimulus “ lodged in them, be continually solicited to expel their Contents more “ frequently, and of a thinner Consistence, than usual. A diminishing “ Perspiration will likewise contribute towards enlarging the Orifices of the “ Hepatic and Pancreatic Ducts ; and, on this Account, the Secretions of “ their respective Juices will be more plentifully made into the Intestines : “ And hence we have an additional Cause of Looseness.”

These Circumstances, I think, are sufficient to account for every Species of the Diarrhoea ; and, when we are once fully ascertained of the Cause, we need not be much at a Loss what Method of Cure ought to be pursued in each Species.

Fluxes have been here very often neglected in the Beginning, from an Opinion, that they are salubrious, and of Service to the Constitution, by affording an Outlet to some offending Matter, which, if retained, would have proved prejudicial.

This Remark may in some Cases be very true ; but it is not to be confided in without great Caution in the *West-Indies*, where a simple Flux frequently rises up into an obstinate Dysentery in Three or Four Days ; and, when the Diarrhoea is suffered to continue any time, it too commonly terminates

terminates in a Leucophlematia, or Dropsy; to which Diseases People in these Parts of the World are exceedingly disposed.

But as a Diarrhoea is sometimes truly critical, and contributes a great deal towards the Cure of other Distempers, such a Diarrhoea ought by no means to be stopped, so long as the Strength of the Patient can support him under it.

The Matter of a Diarrhoea in these Parts is frequently so sharp and corrosive, as not only to carry off the mucous Substance of the Intestines, but also in a few Days to abrade and tear away their villous Coat, and excoriate the Mouths of the Blood-vessels. The stimulating Matter still remaining, the Flux is continued; and, the Orifices of the Blood-vessels being opened at the same time, the Flux must unavoidably become a Bloody one.

Likewise sultry Weather, and hot spirituous Liquors, as well as acrid pungent Food, are capable of producing a Diarrhoea; and as they greatly rarefy the Blood, this Rarefaction, superadded to the Looseness, gives us a satisfactory Idea of their being the Cause of a Dysentery.

This is confirmed, by observing how much this Disease rages among the White Servants, as well as Negroes, in our Plantations; which sort of People are much addicted to debauch in Spirits, and Punch made exceedingly strong with new Rum, very acid with the Juice of Limes, fermented with coarse Sugar.

The almost unanimous Consent of Physicians, as well as Proofs drawn from Practice, have so fully demonstrated the Benefit received from Blood-letting, that it is sufficient only to mention it, to remind Practitioners of the Necessity there is not to omit it in the Beginning of a Dysentery.

The *Indian Root*, or (4) *Ipecacuanha*, hath justly established its Reputation in the Cure of this Distemper, both in those Parts of the World from whence it was originally brought, where Fluxes are (5) endemic, and in all other Places where it hath been used on those Occasions.

But perhaps the Reason why it is found to be superior to the rest of the Emetic Tribe, was not at all considered before the learned and judicious Dr. *Freind* (6), gave us an Insight into that Matter, unless we except one Passage in *Piso* (7).

If the *Ipecacuanha* does not only exert its emetic Faculty, but likewise passeth through the Bowels in such manner as to promote a Stool or two,

(4) Si quando evacuationibus locus, radicem vomitivam *Ipecacuanha*, exquisitissimum naturæ munus, cæteris remediis præferre conducit. *Piso*, p. 39.

(5) Affectus dysentericus nimirum his terris est familiaris, ita ut perpetuo nobis sporadica, & popularis. *Piso* ibid.

(6) Radix *Ipecacuanha* præter vim vomitoriam, quam obtinet, uberrimum sudorem excitare solet. Atque in hoc, quantum ego conjectura assequi possum, præcipue consistit egregia illa in dysentericis affectibus virtus, quam sibi præ aliis vomendi instrumentis vendicat. *Freind Comment. de Feb.* p. 40.

(7) Ad radicem *Ipecacuanha* confugiendum, tanquam ad sacram ancoram, qua nullum præstantius aut tutius, tum in hoc, tum in plerisque aliis, cum vel sine sanguine, fluxibus compescendis, natura excogitavit remedium. Quippe, præterquam quod tuto & efficaciter tenacissimos quosque humores per ipsam alvum, sæpiissime autem per vomitum ejiciat, & a parte affecta derivet, vim quoque astrictivam post se reliquit. *Piso*.

two, which often happens, it will be sufficient that Night to give the Patient a Bolus made with Rhubarb and Diascordium; but if the Physician observes no such Effect from the Vomit, then he generally gives half a Dram of Rhubarb in any convenient Vehicle, in order to carry off any Remains of the stimulating Matter which may adhere to the Guts; for many are the Occasions which confirm the ill Consequences of giving astringent Medicines in the Infancy of this Disease, when the Flux of Blood hath not been immoderate.

After the Bowels have been prepared in this manner, the Physicians have recourse to Balsamics, Agglutinants, Astringents, and Opiates, which must be contrived in proportion to the Necessity of the Patient, the Violence of the Flux, and the Length of its Duration.

If the Sick be much debilitated by the Continuance of the Distemper, and the great Effusion of Blood, a Cordial Draught is generally allowed him to support and invigorate the languid Spirits, such as Claret, or *Madera* Wine, burnt with Spices, or strong Cinnamon-Water, diluted with the white Decoction.

The Food in this Case must be cooling, mucilaginous, and astringent. Panada, made with Casada Bread, is with very good Reason commended by *Piso*, who adviseth it not only as a cooling healing Diet, but as an useful Ingredient in the Composition of Clysters.

The same Author recommends the Jelly of white and red Guavas, Granadilla, Hog-plumb, &c. as proper Nourishment. These are mentioned, because they are always at hand in *Barbados*.

Unripe Plantains and Bananaes, roasted, are also proper for these Patients; but, above all, a Milk Diet.

This Island is likewise subject to a very malignant Fever (though I ^{The Yellow} believe in common with other Countries between the Tropics) now called the Yellow Fever.

Dr. *Warren*, in his ingenious Treatise upon this Distemper, concludes it to be a Species of the Plague, and that the Infection was unhappily brought to *Martinico* in Bales of Goods from *Marseilles* in the Year 1721. though others, who have resided much longer in the Island, are of a different Opinion, especially Dr. *Gamble*, who remembers that it was very fatal here in the Year 1691. and that it was then called the New Distemper, and afterwards *Kendal's* Fever, the Pestilential Fever, and the Bilious Fever.

The same Symptoms did not always appear in all Patients, nor alike in every Year when it visited us.

It is most commonly rife and fatal in *May*, *June*, *July*, and *August*; and then mostly among Strangers, though a great many of the Inhabitants, in the Year 1696. died of it, and a great many at different Periods since.

Symptoms
of the Fe-
ver.

The Patient is commonly seized with a shivering Fit, as in an Ague, which lasts an Hour or two, more or less; and the Danger is guessed at, according to the Severity and Continuance of the Ague.

After the shivering Fit, a violent Fever comes on, with excessive Pains in the Head, Back, and Limbs, Loss of Strength and Spirits, with great Dejection of Mind, insatiable Thirst and Restlessness, and sometimes too with a Vomiting, attended with Pains in the Head, the Eyes being red, and that Redness in a few Days turning to a Yellowness.

If the Patient turns yellow soon, he hath scarce a Chance for Life; and the sooner he does so, the worse.

The Pain in the Head is often very great, when first seized with this Fever.

After some Days are past, this Pain abates, as well as the Fever; and the Patient falls into a breathing Sweat, and a temperate Heat, so that he appears to be better; but, on a narrow View, a Yellowness appears in his Eyes and Skin, and he is visibly worse.

A Yellow-
ness appear-
ing in the
Eyes, a bad
Symptom.

About this Time he sometimes spits Blood, and that by Mouthfuls; as this continues, he grows cold, and his Pulse abates, till at last it is quite gone; and the Patient becomes almost as cold as a Stone, and continues in that State with a composed sedate Mind.

In this Condition he may perhaps live Twelve Hours without any sensible Pulse or Heat, and then expire.

Such were the Symptoms and Progress of this Fever in the Year 1715.

Sometimes likewise the Patients burst out with bleeding at the *Anus*, and soon after die; and sometimes likewise at the Nose, by which means they have been relieved; but when the Blood issues from thence but in few Drops, it is a bad Prognostic, and is generally the Harbinger of Death.

The Tex-
ture of the
Blood.

In most of these Cases, the Patients are generally hot and dry; the Blood taken from them very red, and scarce will coagulate; the Grume swimming upon the Surface of the Serum in a thin Leaf, having scarce any Consistence.

The Patients have likewise often intolerable Pains in and about the Stomach: Sometimes with those Pains they shall have a Livor, and the plain Marks of a Sphacelus shall possess the greatest Part of the Abdomen before they die, particularly the Region of the Stomach and Liver.

It often also happens, that the sick Person shall lie almost stupid; and, being asked how he does, say, He is very well; at other times he labours under the greatest Agonies, and Fits of Groanings.

A loose Tooth being drawn from a Person who had the Fever very severely, there issued out from the Hole a great Quantity of black stinking Blood, which still kept oozing till the third Day, on which the Patient died in great Agonies and Convulsions.

After Death the Corps of such appear livid in some Parts or other; or else marked with pestilential Spots, Carbuncles, or Buboës.

I am

I am of Opinion, that the Blood is from the Beginning full of putrid Alcaline Salts.

If this be the Case, I leave it (with Submission) to the Learned in Physic to consider, whether diluting Acids would not be of great Service (especially in the Beginning of this Disorder) to raise a Conflict, by their mingling with the Alcaline Salts; by which means a Stagnation in the Fluids would be, in a great measure, prevented, until Nature, with other seasonable Assistances, might have time to try her Efforts, and so recover at last.

Without this, or some Help like this, from the Physician, the Patient often dies in three Days time.

Such are the Symptoms, Progress, and Conclusion of this malignant Distemper: And though Dr. *Warren*, in his learned Treatise, is of Opinion, that it can be cured by Diaphoretics and Sudorifics; yet, as this Disease appears in so many various Shapes, these have very often failed.

The next Disease worthy our Notice is the Small-pox; for we are seldom free from it in some Part of the Island or other: However, since Inoculation hath been introduced among us, our Loss by that Distemper hath hitherto been very small. This Island seldom free from the Small-pox.

It hath been observed, that this Distemper proves, in general, very fatal to such of the Inhabitants of the *West-Indies* as receive the Infection in *England*, or in any other Northern Climate, especially if they are taken ill soon after their Arrival at it.

This, I believe, will not be difficult to be accounted for, when we consider, that the Inhabitants of warm Climates do almost continually strongly perspire, by which means their Pores are more relaxed and dilated; and consequently, if this Infection (as surely it may) can be communicated by the Pores, the more open these are, the more capable they are of receiving a deeper Degree of Infection, than those Persons, who every Winter have their external Vessels compressed and contracted by the cold Air. This Distemper often fatal to *West-Indians*, if taken ill in cold Climates.

However, we are not from hence to conclude, that the Pores of such are never to be reconciled to cold Climates; for those of the Skin, as well as the Juices of the Body, will in time become adapted to the different Climates we are in.

It is remarkable, that the Chicken-pox visits this Island at set periodical Times; for it hath been observed by Dr. *Gamble*, a very old and ingenious Physician, as well as a Person of undoubted Veracity, that the following were its periodical Returns within his Observation; viz. in the Year 1692-3. 1711. 1728. 1746-7. which is at the Distance of about Eighteen Years. The Measles a periodical Distemper.

The Leprosy is another Distemper, which some unhappy Persons are afflicted with; nor is it less surprising to Strangers, than a Concern to the most thinking Part of the Inhabitants, that public Care hath not been taken to keep the Clean from the Unclean. The Leprosy.

Among

Among the *Jews*, the Law concerning Leprosy was so strictly observed, that they deposed *Uzziah*, tho' a Prince, and thrust him out of the Temple, and confined him to a separate Apartment during Life.

We cannot trace this Distemper up to its Origin, as far as it relates to the *West-India* Islands; but its first Appearance here was about Sixty Years ago. It hath spread very much within these Twenty Years, and more lately among White Inhabitants, as well as Black. Children have been often seized with it, without any known Cause, either in themselves, or their Parents: However, it is, in general, thought to be hereditary, at least, in the Male Line; which the following Instance will, in some measure, evince.

The Leprosy propagated chiefly in the Male Line.

A certain Negro Woman, in *St. James's* Parish, cohabiting with a leprous Negro Man, had Two Children by him, both leprous, though she herself did not receive the Infection. After some Years she turned him off, and cohabited with another Black, who was free from this Disorder; by him likewise she had Children, but neither of them in the least infected with the Leprosy. After a Quarrel with this last pretended Husband, she returned to her former leprous Husband, and had this Second time by him several Children; who, as they grew up, proved leprous also, tho' she herself received not the Infection this time.

From hence we may perhaps learn to know how emphatically, and with what great Propriety of Expression, the inspired Prophet passed Sentence upon *Gebazi*, saying, *The Leprosy of Naaman the Syrian shall cleave to thee, and thy Seed for ever.*

Its Symptoms.

The first Symptom of this loathsome Disease, in this Part of the World, is a permanent Swelling on the Tips of the Ears, and the Falling off of the Hairs of the Eye-brows; then the Face appears unctuous, shining, and full of protuberant superficial Spots of a brown Copper Colour; the Lips and Nose generally much swelled, the Fingers and Toes distorted, and at last ulcerated; the Infection creeping from Joint to Joint, till it hath corroded all the Fingers and Toes. These Ulcers never kindly digest; however, there issues from them a thin corroding Ichor.

Many are the miserable Objects, that are daily seen afflicted with, and labouring under, this great Misfortune.

The Elephantiasis.

The Elephantiasis is likewise a Disease very common among the Blacks, and hitherto incurable.

The Seat of this Distemper is the Legs and Feet. It happens most commonly after long Illnesses, especially severe acute Fevers, or long Intermittents, or other tedious Distempers, or Surfeits, occasioned by too violent Exercise.

Its Symptoms.

In the Beginning the Patient appears cachectical and emaciated, and soon after the vitiated Humours subside, generally in one Leg, sometimes in both Legs and Feet: These become tumefied, and the Veins distended with varicose Swellings, which are very apparent, from the Knees to the Extremities of the Toes; "then the Skin begins to grow rugged and
"unequal;

“unequal; its vascular and glandulous Compages is enlarged; and a scaly Substance, with a sort of Chaps and Fissures in the Interstices, appears upon its Surface. These seeming Scales do not dry up and fall off; but are daily protruded forward, and stretched in their Dimensions, till the Leg is enlarged to an enormous Bulk; so that in the Size, Shape, and all other external Appearance, it minutely represents the Leg of an Elephant, from whence the Disease receives its Denomination.”

But, notwithstanding that this scaly Coat appears to be hard, callous, and insensible; yet if it be touched ever so superficially with a Lancet, the Blood will freely ouze out; and, if the Epidermis, which affords this monstrous Appearance, be pared off to the Thickness of the Scarf-skin in those Parts, an Infinity of Orifices of the Blood-vessels will present themselves to the Eye, when assisted with a Microscope.

“Though the Limb continues to proceed to this inordinate Magnitude, yet the Appetite of the Negro remains good, his Digestion strong, and his Secretions regular; nor is he sensible of any other Inconveniency, than the Burden of carrying such a Load of a Leg along with him.”

In this Condition, several have been known to live Twenty Years, and have performed chearfully all the Duties of their Servitude, which were consistent with such disproportionate Limbs.

Amputation of the diseased Leg hath been performed many times, but has always failed of a Cure; for the Distemper constantly takes Possession of the remaining Leg.

As for other cutaneous Disorders, we are not more afflicted with them than *Europeans*, unless such as are occasioned by the *Guiney Worms* and *Ciegos*, called here *Chiggers*.

The former are seldom or never known among the White Inhabitants; nor often among our native Slaves; but chiefly among new Negroes brought hither from the Coasts of *Guiney*.

These Worms are generally bred in Ponds of stagnant fresh Waters; and it is supposed, that they enter oftener in by the Pores of the Skin, than by drinking the Water: For those who most frequently bathe in such Ponds, are ofteneft troubled with them. They are exceeding long, in respect to their great Exility and Thinness; and are easily observed, when some of that Water is mingled in a Glass with some other more transparent Water.

The first Day or two they cannot be clearly seen, being as pellucid as the Water itself; but soon afterwards they grow so opaque as to be discernible, even by the naked Eye.

Dr. Gamble had one of these, which measured an Ell long; it exactly resembled a waxed white Thread.

They move very quick under the Skin, along the *Membrana adiposa*; and what is one Day seen in the Breast, or Belly, shall often, in a Day or two, be found in a distant Part of the Body, perhaps the Thigh, the Leg, or under the Ham.

M

However,

However, these are easily cured, by a Method sometime since found out.

The Method of destroying them.

Take, for Example, one Ounce of Garlick, one of Black Pepper, pulverized, and one Ounce of the Flour of Brimstone; mix these well together in a Quart of Rum; and for three or four Mornings successively give a Wine-Glassful of this Infusion to the Person afflicted; and if he hath a Thousand about him, each will contract itself in a Coil, and die, and then fall off in the Form of a Boil from the Surface of the Skin.

As to Ciegoes, they will appear to the naked Eye like a small Flea: These are the continual Companions of Filth and Laziness, troublesome chiefly to Negroes, and particularly to such new Negroes as are brought hither from *Guiney*, whose Despondency, and careless Regard for Life, from the Uncertainty, or rather Certainty of what they are to undergo, makes Life, at that Juncture, irksome to them; though a few Years Experience convinces them, that if there can be a Degree of Happiness without Liberty, they enjoy a more certain Tenure, and a better Condition of Life, here, than in their native *Africa*.

Ciegoes how discovered.

This little Animal, vexatiously teasing, unless soon eradicated, generally fastens and settles on the Toes, or some Part of the Feet. It is first discovered by a moderate Itching in the Part affected, afterwards with a throbbing itching Pain; and if not soon carefully picked out with a Pin or Needle, it will, in time, burrow or nestle one Eighth of an Inch into the Flesh, and there lay innumerable Quantities of Nits or Eggs, which, when hatched, become equally voracious, and eat the Feet into so many little Cells, like Honeycombs.

It is not likewise uncommon for these little Vermin to get into the Feet of People of the best Condition; but as they are soon taken out by their Slaves, it seldom proves to be of bad Consequence: Tho' Strangers, not being sensible what occasions the Itching, will sometimes let them remain, till they become very (8) troublesome, and perhaps require the Hand of the Surgeon.

Likewise the Body-Yaws, and the Running-Yaws, so common here, are Disorders unknown in Northern Climates.

The Body-Yaws.

The Body-Yaws appear in many protuberant fleshy Knobs, every way as large as a small Thimble, embossing the Face, Breasts, Arms, and other Parts of the Body. These, in time, by the Use of Simples, hereafter to be mentioned, dry and fall off.

The Running, or the Wet, Yaws affect chiefly the Joints, especially the Knees or Elbows, from whence continually distils a sanious Humour.

This Distemper is thought to be transmitted in an hereditary Way from Parents, who have had the Venereal Disease, to their unhappy Children.

It is observable, that no small Care, Skill, and Time, are requisite to cure it.

O F

(8) *Castile* Soap and Lamp-Oil, boiled to a Consistency, and applied hot to the Feet, is one of the best Methods of destroying the Ciegoes.



O F

WATERS, FOSSILS, *and* MINERALS.



Of W A T E R S.



T being unnecessary to inquire into the constituent Parts of Water in general, in a Treatise of this kind, I shall proceed to consider only the Nature and Qualities of that which we are furnished with in this Island, from Springs, Rivers, Wells, and Ponds.

The most remarkable Springs of Water are the following: *Cole's Cave* Spring, Mr. *Colliton's*, Mr. *Estwick's*, Mr. *Brathwait's*, the Reverend Mr. *Foster's*, Mr. *Whitaker's*, *Pory* Spring, and that at *Codrington's College*.

The specific Gravity of Fifteen cubical Inches of these respective Waters, as well as compared together with that of the most remarkable Spaws, is inserted in the annexed Table.

The specific Gravity of Barbados Water, compared with some remarkable Spaws.

As *Cole's Cave* Water hath been generally esteemed (tho' not so in Fact) the best Water in the Island, I have been very careful in the Examination of it. The Spring which issues so plentifully from the Side of the Cave, affords very transparent Water, having something of a styptic Quality; and it hath been observed, that bathing in it is of great Service in cutaneous Disorders.

Among the above-mentioned Springs, that in the Estate of the Reverend Mr. *Foster*, called *Belly-ach Hole*, affords excellent Water. This Spring rising, as most of the rest do, out of the Side of an Hill facing the East, hath a fine marly Bottom, mixed with Sand: The Water is very light, soft, and pure. There

There is likewise on the same Estate, near the Mansion-house, another Spring, whose Water is heavier, and somewhat purgative.

Pory Spring, in *St. Thomas's* Parish, and another at Mr. *Estwick's*, in *St. John's*, as well as Mr. *Whitaker's* Spring, in *St. Michael's* Parish, afford good light Water: The latter, by its Vicinity to the Sea, is of great Service to supply the Navy, as well as other Vessels, in the adjacent Bay.

The chief
Rivers in
the Island.

The chief Rivers are *St. Joseph's* River, another running through the Parish of *St. Andrew's*, a Third taking its Rise from Mr. *Brathwait's* Spring, and the Fourth near *Codrington's* College.

All the above-mentioned Streams, with some others of lesser Note, on this Side of the Island, fall into the Sea to the Eastward.

Wells and
Ponds.

Our Springs and Rivers of any Note being thus taken briefly notice of; let us now proceed to consider our other Supplies, our Wells and Ponds.

The former are dug with great Expence through, generally, a soft marly Rock, intermixt sometimes with Veins of an harder Nature. These Wells are commonly in Depth from Fifteen to Fifty (9) Fathoms, and their respective Water (especially if the lower *Strata*, from whence it gushes, be Clay, Gravel, or Rock) is preferable, as to its Purity, to River-Water, the latter having generally several Impurities blown into it by the Wind, as well as contracted from the different Soils it passes through, whereas the Well-Waters are very limpid and light.

Mr. Osborne's
Well-Water
proved to
excel all
other.

Among the Waters of many of these that I have examined, that from Mr. *Osborne's*, in *St. Peter's* Parish, excels every other, whether of Wells, Springs, Rivers, or Ponds, in this Island. It is lighter by one Grain, in so small a Quantity as Sixteen cubical Inches, than the pure *German Spaw Water*. The Depth of this Well is not above Fifteen Fathoms, thro' a somewhat soft rocky *Stratum*, terminating in an hard firm Rock: An Hole being made in this, the Water gushes out from beneath; and the same being again stopped with a Plug, and the remaining Water drawn out, the Bottom of the Well may be, and often is, clean washed; and then the Water is permitted to gush out afresh.

I am of Opinion, that the Purity of this Water, above all other in the Island, is owing partly to the Situation of the Place: For, as the Well is dug thro' several rocky *Strata*, beginning in so very high Ground, that its Bottom is higher than the adjacent Plain; consequently it can receive no other Supply but Rain-Water, which (Snow-Water excepted) is the most simple of all others. And when this gradually penetrates thro' many thick *Laminae* of porous Rocks, by this natural Distillation, as it runs, it refines; that which is purest pervading the closest *Strata* by the Minuteness of its Parts, whilst the grosser Particles, being arrested in their Passage, subside, and cleave to the Rocks.

Another

(9) It is not always that they come to Water, tho' they dig a great Depth. An Instance of this I have observed in the Estate of *Tobias Frere, Esq;* in the Parish of *Christ-Church*; where, after digging Thirty-five Fathoms, they found little or no Water.

Another Reason why Spring-Waters, at their Fountain-Heads, as well as Wells, are purer (especially in hot Climates) than the Waters of Rivers or Ponds, is, because the latter, whether in its current Stream, or in Reservoirs, is exposed to the Heat of the Sun, whose exhaling Power is here so great, that it raises up the lightest and simplest, that is, the best Parts of it in Vapours, leaving the Remainder less pure.

What is here called Pond-Water, is Rain-Water settled in artificial or natural Basins, which, in a Country so sparingly furnished with Springs, or Rivers, are of great Service to Man and Beast.

These Reservoirs are generally dug near a Descent, that they may be supplied with Water as often as it rains, which it generally does in greater Quantity, in the Months of *June, July, and August*; but tho' we call this Time of the Year the Rainy Season, yet the periodical Return of wet Weather in those Months is not near so certain here, as it is in some Parts of *Africa*. The Rains likewise in those hot Months, when they are most wanted to cool the Atmosphere, fall at such times, by reason of the Rarefaction of the Air, in very large Drops, like those sudden Summer Showers in *England*. We find the above-mentioned Conveniencies of Reservoirs made use of in *Palestine*, as early as the Patriarchal Age.

The Inhabitants of *St. Andrew's*, and some Part of *St. Joseph's* Parish, are plentifully supplied with fresh Water, by digging Holes in the Sand, from Ten Inches to Three Feet deep: These are almost instantaneously filled with fresh Water percolated thro' the Sand.

Ponds or
Reservoirs
in Use
among the
Antients.

Some Parts of *Barbary* are, in the like manner supplied: And *Cæsar*, being besieged in *Alexandria*, when the Enemy, by turning the Sea-Water into his Springs, rendered them useless, saved himself, and his Army, by digging such Pits or Holes in the Sand, from whence he had a constant Supply of fresh Water.

Tho' these and such Supplies of Water proceed partly from the Sea; yet I am of Opinion, that the above-mentioned Supply, in this Island, is greatly, if not chiefly, owing to the Rain-Water that descends from the adjacent Hills, and then settles in the Sand. This is evident from the greater Plenty that is to be found, and that nearer the Surface, after great Rains: Its Purity likewise may, in some measure, be owing to the Place where it is found; for Sand hath a great deal less of Matter capable of Solution in it than Earth.

As any artificial Reservoir of Water is often, in Scripture, called a Well, when the Station of the *Israelites*, in their Way to *Canaan*, was upon the Borders of the *Red Sea*, the Waters there mentioned to be in such Plenty, that the Princes digged a Well with their Staves, must probably (since they digged with these Instruments) be in such a sandy Situation as the above-mentioned; otherwise Staves would not, in Places less soft and porous, be proper to dig Holes sufficient for that Purpose. The digging these, or almost any other Basin, for the same Use in any other kind of Soil, must, in all Probability, be attended with Art, and

great Labour, since we find, that it caused a Contention between *Abraham* and *Abimelech*.

Many, I believe, are the Places in the *Old Testament*, where, with great Submission to our learned Commentators, from their Want of sufficiently considering the Situation of *Palestine*, the Nature of the Climate, and its Productions, the real Meaning of several Texts is either very imperfectly or often not at all, understood.

Of all the Waters we have treated of, that of Mr. *Osborne's* Well, as I before observed, is the lightest and best; and it hath been proved of great Service in Nephritic Cases.

The Water of *Belly-ach Hole*, in the Estate of the Reverend Mr. *Foster*, is next in Goodness, being a soft limpid Water.

Each of these, by their great Lightness and Purity, enter the finest Vessels, where they dissolve, and wash away, the stagnant Humours, take off the Sharpness of the Juices, and break the Coagulations and Acidity of the Blood.

Pure Water likewise dilutes, prepares, and corrects the crude and ill-concocted Juices, dissolves their Salts, and blunts their Force: And as the Decay of human Nature is owing to Obstructions; and Wrinkles, old Age, and even the Dissolution of the human Frame, are, in general, chiefly owing to the Want of sufficient Motion in the Fluids; it is highly probable, that Water (how little soever esteemed by the Generality of Mankind) more excellently divides the Blood and Juices, than any other Liquid whatsoever; and therefore is of the greatest Service to preserve Health and Life.

Whoever would be curious enough to inquire into its various efficacious Excellencies, either in Scorbutic, or Hypochondriacal Diseases, and even in inflammatory Fevers, may consult the ingenious Dr. *Hoffman's* and Dr. *Shaw's* Experiments upon different kinds of Water.

Mineral
Water.

After the strictest Inquiry, I found in the whole Island but Two Springs, that had any Appearance of a Mineral Principle; the one in the Estate of Mr. *Richard Richards*, in the Parish of *St. Andrew's*; the other at Mr. *Perry's* Estate, in *St. Joseph's* Parish: The former turns of a faint Purple with the Powder of Galls; the latter instantly of a deep Purple; and, like the *Pyrmont*, resumes its first Colour, upon dropping into it a few Drops of the Spirit of Vitriol. The Discovery of this Water may, and I hope will, be of great Service in all Cases where Chalybeats are required.

Aquatic Ani-
malcules.

I shall conclude my Observations upon these Heads with a cursory Description of the several aquatic Animalcules, which I have observed, more or less, to inhabit every Reservoir of Water, especially Ponds.

The Sides of these are often covered with a greenish Incrustation in Appearance, as if there were many coarse Grains of Sand cemented to their stony or rocky Sides: These, even to the naked Eye, upon a narrow Inspection, seem to be alive; and the Quantity of a Pin's Head being diluted

diluted in Water, and viewed through a Microscope, there appear about Eight or Nine little Animals, moving, or rather darting from Place to Place, with a very quick irregular Motion: Their whole Bodies are pellucid, and look in the Water like so many Drops of Quicksilver, their Legs being Four of a Side, moving with great Rapidity.

What is called a Water-Bug, is about an Inch long, and Three-quarters broad: This is to be found in most Ponds in the Island; but seldom or never in Well-Water. The Origin of this Bug is a Pond-Worm of about an Inch and a Quarter long, the Body jointed, and the Head guarded with a *Forceps*: The whole Worm, as most Aquatics are, is of the Shrimp-kind. This, a little before its Transformation, inwraps itself in an hollow Lump of Clay in the Bottom of the Pond: Some time afterwards it casts off both its Shape and *Exuvie*, and becomes a Bug: In this last Stage, by the Armour upon its Back, and the Fins it paddles with in swimming, and its frequent Recourse to the Surface for Air, it somewhat resembles a Tortoise in Miniature.

The Water of a great many of these Ponds, at different Times of the Year, especially in a dry Season, when the Water is low, and the Weather somewhat calm, throws up a greenish Scum to the Surface: This is so strong a Poison, that, if swallowed with the Water by Poultry, such as Turkeys, or even by Black Cattle, they in half an Hour's time expire.

Having examined this Scum with a Microscope, on the same Day that a Two-years old Bull had been poisoned by drinking in the same Pond, I observed, that a Drop of it contained several very compact *Fasces*, or small Fagot-like Bundles; the Extremities of their constituent Parts being, in Appearance, so many crystallized *Spicula*.

I likewise discovered, in the same Drop of this Scum, which was diluted in fair Water, several Annulets, each Link of the Chain being of an orbicular Form, barely touching one another.

It is said, that this Scum is at times full of small Animalcules: However, I cannot affirm this to be true from any Experience of my own.

A TABLE of the specific Weight of Fifteen cubical Inches of the Waters of the principal Springs, Wells, &c. in the Island of Barbados, as well as the Weight of these, compared with some other Mineral Waters.

		Weighed — Ounces. Drams. Grains.		
Fifteen cubical Inches of	Mr. Robert Osborne's Well-Water, in St. Peter's Parish —	8	3	12
	Cole's Cave Water —	8	3	14
	The Spring at Codrington's College —	8	3	15
	Belly-ach Hole —	8	3	13
	Pory Spring Water —	8	3	14½
	Pond-Water —	8	3	19½
	Pond-Water filtrated thro' a Water-stone —	8	3	15½
	Rain-Water, received from the Eaves, after long Rain —	8	3	14½
	Pymont-Water —	8	3	19
	Bay-Water, by Percolation thro' the Sand —	8	3	14½
	A weak chalybeat Water, in the Estate of Mr. Richard } Richards }	8	3	14
	The same Quantity of Barbados Proof Rum weighed Seven Ounces and an half, Two Drachms, Twelve Grains and an half.			

I recommend to the Inhabitants of the Sugar-Colonies this Method of proving their Rum: Which would prevent the many Differences that arise between the Planters and the Merchants; for, by this means, if this general Standard were fixed in some Office, recourse might be had to it, to determine any Dispute of this Nature.

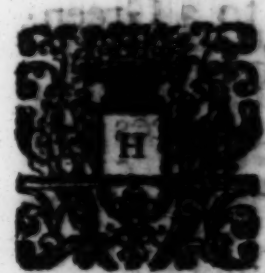
The present Method of proving Rum in *Barbados* is liable to many Inconveniencies; for now the same Rum that is not, in reality, saleable, whilst in the Store-house, may, by being exposed to the Heat of the Sun, as is often done, be made to appear far better than it really is; and, by this means, the unwary Purchaser is not only imposed upon, but the Credit of the Island, as to good Rum, is lessened in foreign Markets.

It is by such wise Regulations that the *Jamaica* Rum is every-where preferred to ours: And, indeed, it is far preferable to our Market Rum; tho' not to be compared with the Cane-Juice-Spirit made in *Barbados* by the Planters for their own Use, tho' seldom or never exported for Sale.





O F
F O S S I L S.



HAVING in the First Book proved the Trade-Wind to be coeval with the Deluge, as well as from the remaining *Vestigia* upon the Surface of the Island, that the Course and Current of both ran conjunctly Westward, our Variety of Sea-Shells, and other Marine Spoils, dug up at different, though small Depths, prove likewise that this Place hath undergone a Share of that universal Shock, which Nature felt at the Deluge.

But as our Fossils are found here much nearer the Surface, than those of the same Kind, and specific Gravity, in more variable Northern Climates, I shall endeavour (tho' a thing hitherto unattempted) to account for the different Degrees of Force of the Deluge in the Northern, and those Southern Climates near the Equator: For, tho' the Face of the whole Earth was covered with Water; yet it undeniably appears, from the greater Number of Fossils dug out from among deeper *Strata* in the former, than the latter, that the Disunion or Liquefaction of the Globe must be then greater and deeper in the Northern, than in these Southern mild Climates.

This Difference I conceive to be occasioned, first, by the sudden Shiftings of the Winds (a thing common in variable Climates), which, in their Turns, must needs diversly determine and impel the Course of the Waters (perhaps during the Forty Days Continuance of the Deluge) to all the cardinal Points.

Add to this the more rapid Rise and Fall of the Waters, in the Flux and Reflux of the Tides, during that Inundation; for, as the Position of the Moon, with regard to the Earth, was not then changed, and as we read of no Miracle to suspend her Power, her Influence over the Element

Fossils found generally near the Surface between the Tropics.

The Reason why the Force of the Deluge was less between the Tropics.

ment of Water must (*cæteris paribus*) have the same Effect as it hath now; that is, in some Northern Countries, the Attraction of the Moon, upon the Surface of the Water, is so great, that it rises at high Tides, especially at the Vernal and Autumnal Equinoxes, to Forty Feet; whereas in this and the adjacent Islands, when the Moon describes its largest Circle, it never rises above Four Feet, and about Five Inches: Therefore, as the Force of Four is to Forty, so much more strongly must such Northern Climates feel these Percussions.

After repeated Searches into the Sides of broken Cliffs, Caves, and deep Wells, I never found any Veins of uncommon Earth, such as *Terra Lemnia*, or *Bolus Armoniacus*, or of any other worth mentioning, except Three Veins of coarse red Oaker, Two in *St. Lucy's* Parish, and One near *Codrington's College*, in *St. John's* Parish: This, where better Paint is wanted, serves tolerably well to daub over Wind-mill Vanes, or such rough Work.

Green Tar
a Bitumi-
nous Fossil.

As our most remarkable Fossils are of the Bituminous Kind, I shall begin with the green Tar.

This is an oily Bituminous Exudation, issuing from some Hills in *St. Andrew's* and *St. Joseph's* Parishes, of a dirty Black, inclining to a Green.

The Method of procuring it is, to dig an Hole or Trench in, or very near, the Place where it ouses out of the Earth: This by degrees fills with Water, having a thick Film, or Cream, of this liquid Bitumen swimming upon the Surface; from whence it is skimmed off, and preserved in earthen Jars, or other Vessels.

The most convenient Season for gathering it is in the Months of *January*, *February*, and *March*.

It is of so inflammable a Nature, that it serves to burn in Lamps.

Its medi-
cal Qualities.

As to its medicinal Qualities, it is chiefly made use of with great Success in paralytic and nervous Disorders, as well as in curing cutaneous Eruptions. It is of so penetrating a Nature, that when an Horse, that hath been dosed with it, begins to be warm upon his Journey, the Rider will smell the Tar very strongly,

This, and one of a blacker Colour, in *St. Joseph's* Parish, are all the liquid Sorts found in this Island.

Solid Bitu-
men found
in *Barbados*.

There is likewise another Species of Bitumen, of a solid Substance, called here *Munjack*.

This is dug out of Beds, or *Strata*, of Earth, at different Depths, in the Sides of Hills in *St. John's* and *St. Andrew's* Parishes; and nearly answers the Description of that Bitumen, which the Reverend Mr. *Maundrel* found on the mountainous Sides of the *Lacus Asphaltites*, or the *Dead Sea*, where formerly stood the Cities of *Sodom* and *Gomorrab*. This Sort, in a great measure, answers the Use of Coals.

The Land
barren where
Bitumens are
found.

Where the liquid Kinds are thrown up out of the Earth, the Surface of the Ground is one continued Quagmire, bearing very little, if any Grass; and

and where the more solid is dug out, if the Veins are upon, or very near the Surface, scarce any Vegetable grows upon it.

If by Accident any of these Veins take Fire, they continue to burn a long time, tho' in a dull slow manner: For, as the Veins are surrounded with Earth, this crumbles, and, falling into the Flame, stifles it.

There was an Instance of this in *St. John's* Parish, where a Slave roasting Potatoes upon the Side of an Hill, a small Vein of Bitumen, lying very near the Surface, took Fire, and continued slowly to burn, tho' sometimes scarce perceptibly, for above Five Years, without the least Danger to the Neighbourhood.

If the inquisitive *Monf. Le Clerc* had more narrowly inquired into the Nature of Bituminous Fossils, and the Soils wherein they are always found, M. Le Clerc's Opinion confuted. he would not, in all Probability, have been so tenacious of his favourite, tho' groundless Opinion; viz. That the Destruction of *Sodom* and *Gomorrab* was not supernatural; but that the Plain, upon which they stood, was full of Bitumen, which, enkindled by Lightning, destroyed the Cities and Plains thereof.

Let us now examine this fine-spun Conjecture: If this Destruction was caused in this natural Way, the Supposition will require as much a Miracle to bring it about, as if he had suffered *Moses's* Description to be true: For here must be such Veins of Bitumen found, as will kindle in an Instant; and the Lightning must be, as it were, as extensive as the whole Plain; whereas the Bitumen, that is now in small Quantities found in the Sides of the adjoining Hills (and, in all Probability, ever was found there, and not in the Valley), is of a Coal-like Substance, like that found in *Barbados*; and is far from being capable, in a natural Way, of causing so quick a Destruction: For if these Plains and Cities were by this natural Means destroyed, the Cause must be as extensive as the Effect: And, as these Plains were Seventy-four Miles long, and Eighteen broad, they must be wholly, or in such a Part, impregnated with this inflammable Matter, as to be capable by its Quality, and sufficient by its Quantity, to cause so general a Destruction: But that these Plains were not wholly, nor in so great a Part, sufficiently stored with such combustible Ingredients, will evidently appear, if we allow, as surely we must, that Nature is as consistent in her Productions of this kind, as she is in other Minerals, Fossils, and Vegetables.

Neither the Cedars of *Lebanon*, nor the Mountain Oaks, are found in any Climate growing in wet Marshes; nor Reeds nor Rushes upon the Tops of dry Mountains.

This is an Observation as early as the Time of *Job*: *Can the Rush grow without Mire, and the Flag without Water?*

Virgil likewise gives it in the following Lines:

*Nec vero terræ ferre omnes omnia possunt.
Fluminibus salices, crassiq; paludibus alni
Nascuntur, steriles saxosis montibus orni.*

Littora

Littora myrtetis letissima : deniq; apertos

Bacchus amat colles ; Aquilonem & frigora taxi.

VIRG. G. II. 109.

Nor ev'ry Plant on ev'ry Soil will grow :

The Swallow loves the watry Ground, and low ;

The Marshes, Alders : Nature seems t'ordain

The rocky Clift for the wild Ash's Reign ;

The baleful Yeugh to Northern Blasts assigns ;

To Shores the Myrtles ; and to Mounts the Vines.

From hence we may learn, that there are Soils particularly adapted to the different Kinds of Vegetables ; and consequently conclude, that Fossils likewise, Minerals, &c. will not thrive in an improper Soil.

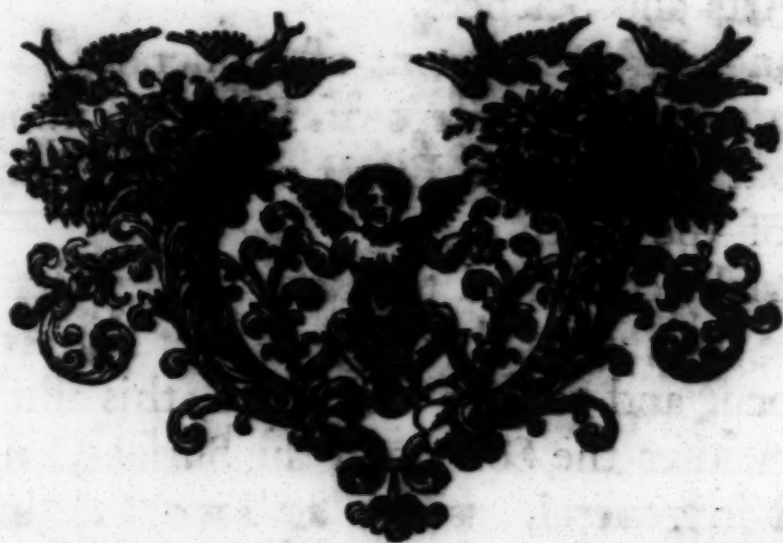
This leads us to consider the Situation of these Plains : And when we find, that the Whole was an Inland Country, without Trade or Navigation, but what the River *Jordan* afforded, we must of course conclude, that the Subsistence of the numerous Inhabitants must depend upon the Fertility of the Land, and not on foreign Supplies : Therefore, how consistent with that Prudence, which every Age of the World possessed, would it have been to settle in so barren a Spot, not capable of producing the common Necessaries of Life ! Yet so it must have been, if the whole Plain was impregnated with this Bitumen : Or, if we suppose, that there were only Veins of it interspersed through this spacious Plain, how fierce and rapid soever the enkindled Flames of these Veins might be ; yet their destructive Influence and Power would be confined almost intirely within their own proper Channels ; so that the rest of the Country would be in no Danger of so quick and so general a Calamity, as befel it in this supposed natural Way.

We might pursue this Argument farther (if any additional Proofs were wanting) ; and observe, that the present, and in all Probability, the former Veins of Bitumen were found, not in the Plain (which was very justly compared with *the Garden of the Lord* for Fruitfulness), but in the Hills on the East and West Sides of it : And, as the River *Jordan*, at this time, somewhat above the Lake, is almost as wide as the *Thames* at *Chelsea*, and ran formerly from North to South thro' the Plain ; if we even suppose, that whole Torrents of this liquid Fire burst out from the Sides of either of these Hills, their destructive Course would be stopped, when it reached such a Body of Water as that River contained : So that, unless we extravagantly suppose, that the Mountains on the East, and their opposite on the West, which were Eighteen Miles asunder, took Fire very critically at the same time, the Country on one Side or other of the River must, in all Probability, have been safe, by the Interposition of so great a Quantity of Water.

Lastly,

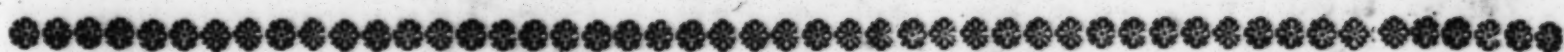
Lastly, If we suppose, that the whole Plain was sufficiently stored with Bitumen to cause, in a natural Way, such a Desolation ; then we must necessarily grant, that it must be a very barren Spot, and improper to be inhabited, contrary to its Situation, with regard to the Climate, and contrary to the Description which is given of it : For, *When Lot lifted up his Eyes, he beheld all the Plain of Jordan, that it was well watered everywhere ; and therefore made Choice of it.*

I hope I have said enough to shew, from the Nature of this Kind of Fossil, and the Barrenness of the Place wherein it is always found, as well as from the great Extent and Suddenness of the Destruction, that it could not proceed, as Monf. *Le Clerc* imagined, in a natural Way, from the Firing of these supposed Bituminous Veins, but from the miraculous Power of God.

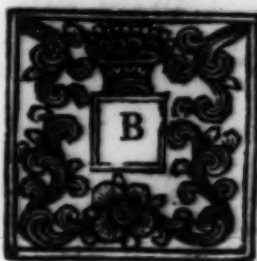




Of MINERALS.



The Uses
of Minerals.



ESIDES the Use of Minerals in Phyfic, they are designed for several other Ends, as well as for Ornament; but their chief Value is in Money, which is become the common and most prudent Method of Exchange: Nor are their Advantages in Utensils to be forgotten, whether they are designed for the common Purposes of Life, or made into Instruments necessary for the Improvements of Arts and Sciences.

In the various and different Forms of Minerals, as well as their Qualities, we find such evident Footsteps of Divine Wisdom, as leave us no room to suspect, that they are the Effect of blind Chance, tho' formed in the deep Recesses of the Earth.

Men have universally consented to stamp the greatest Value upon Gold: And tho' they have as universally assigned the hottest Climates, as the most natural to ripen, and to give Colour to, this illustrious Ore; yet, in this warm Island, neither the Soil upon the Surface, nor at any Depth in the Earth, at least in general, as far as Two (1) hundred Feet deep, give any promising Indications of either Gold or Silver.

Gold found
in Barbados.

However, we have some Cause to believe, that we are not intirely destitute of the former; for there was found in Colonel *Abel Alleyne's* Estate, on the Surface of the Earth, a Piece of Ore, which, upon Trial in *England*, proved very pregnant with Gold; but, tho' diligent Search was made by digging and otherwise, there was no more discovered.

There is but one other Instance, that I can venture to mention with any Certainty; and that is, a small Piece of Gold, now in the Possession of *James Bruce, Esq;* which was extracted from some Ore sent to *England* from hence by Dr. *Bruce*: But as that Gentleman died before the Experiment was made, it is not well known in what Part of the Island he found it.

There

(1) There is not a Parish in the Island, nor scarce a large Estate, but hath a Well dug in it: And a great many of these are very deep; especially one in the Estate of *Francis M^cMahon, Esq;* which is above Two hundred Feet deep.

There is likewise a Species of Mineral found in *St. Andrew's Parish*, in *Scotland*. This is as bright as polished Brass, and generally of cubical Figures: By its Weight and Colour it is apt to give Hopes of being rich in some valuable Metal; but, being with great Care tried in the Crucible, it produced no manner of Metal. I take this to be a sulphureous Marcasite, or the *Pyrites flavus*; tho' it is seldom met with here in globular Figures, as it is most commonly found in *England*.

There are also Stones taken out of the Sea, that are very hard and ponderous, containing, by their dusky ferrugineous Colour, probably much Iron, and by their Smell, when broken, much Sulphur. The same are sometimes to be met with on Land, especially at the Estate of the Honourable *Samuel Rouse, Esq*;

The Soil likewise, in a great many barren and hilly Parts of *Scotland*, is often mixed with small Flakes of Icinglass, as well as Pieces of transparent Talc; the latter especially, in the Estate of *Miles James, Esq*; where are to be seen solid pellucid Pieces, weighing no less than Fourteen or Fifteen Ounces.

And in *St. George's Parish* are often dug up Lumps of a transparent resinous Substance, at first Sight exactly resembling Refin. What chiefly distinguishes it from Refin, is the Fragrancy of its Smell. Upon comparing it with the Gum of the Birch Gum-tree, I found it to be of the same Species.

In sawing Stones for Building, there are often found, in the middle of solid Blocks of Stones, several kinds of Shells; some of them not to be found on our Shores, especially the long Muscle-shell.

I have likewise a middle-sized petrified Echinite, taken from the middle of a Piece of a split Rock.

The Description of our Ores and Fossils being finished, it may not be improper, before we leave our subterraneous Inquiries, to take notice of some of our most remarkable Caves; especially as these are many in Number, and some of them not only curious in the various Appearances of their petrified Icicles (if I may so call them), and other Conglaciations, but likewise, together with our deep Wells, very serviceable to prevent Earthquakes, by giving at so many Mouths Vent to those (2) Vapours, which would otherwise be confined in the Bowels of the Earth.

My Inquiries into these Caves were the most laborious and dangerous; they were also by far the least pleasing to myself; and I fear the Description of them (*Cole's Cave* excepted) will prove least instructive or amusing to my Readers: But as common Report, long before my Intention of undertaking this Work, was strong in favour of several very extraordinary Representations in some Caves in my own Parish; especially, that there was, in one, the Effigy of a Woman with a Child in her Arms; and, a little

(2) In the Time of great Droughts, the Air is not only very hot, but sometimes it smells sulphureous: This I particularly observed on the Third Day of August 1747. These sulphureous Vapours were dissipated as soon as the Cliffs of the parched Earth were saturated with the Rain, which, about that Time, fell in great Plenty.

little beyond it, a lively Representation of a Lion; and as it would ill become me to deliver such traditional Reports as true, without the utmost Certainty; I went down into several of these Caves, but not without Difficulty, and Danger of being suffocated, being often taken with a violent Vomiting, when I came out into the open Air; with the additional Mortification of finding, that the petrified conglaciated Substances, so strongly affirmed to bear such Portraitures, might, without the Assistance of any far-fetched Ideas, be as well said to represent a Cock and a Bull, as a Woman and a Lion.

The Inadvertency and credulous Propensity of the Vulgar, on one hand, to believe every Story, that hath something marvelous in it; and, on the other hand, that infatuating Fondness and Pride some Men have to be thought more knowing than their Neighbours; together with lucrative Considerations; gave the crafty Part of Mankind an early Opportunity of ushering into the Heathen World the Belief of Harpyes, Centaurs, and Satyrs, as well as, in a more enlightened Age, the less pernicious, tho' not less ridiculous, Existence of Unicorns, Griffins, and Flying Dragons, with a great many other such senseless Chimera's, which serve to astonish, and set the weak and ignorant Part of Mankind a gaping.

Cole's Cave.

As *Cole's Cave* is by far the largest, and most worthy our Notice, I shall confine myself to the Description of that alone: First, observing that I never took a Survey of it, but it strongly affected my Imagination, and recalled to my Mind that awful Description, which *Virgil* gives us of the first Entrance into the Shades below:

Spelunca alta fuit, vastoq; immanis biatu.

Its Situation is almost in the Bottom of a melancholy hideous Gully (3), which is about an Hundred and Sixty-five Feet deep; where, above you, nothing is to be seen but the Tops of high Rocks, and impending Cliffs, thro' the gloomy Branches of lofty Trees.

*Such was the solemn Silence, which o'erspread
The Shrine of Ammon, or Dodona's Shades;
When anxious Mortals from the Mouth of Jove
Their Doom explor'd. - - -*

GLOVER'S Leonid.

The Descent, towards its Entrance, is by a steep craggy Precipice of great Height, where your Security from a Fall depends much upon the good Hold you take of the Roots of Trees, and Branches of Underwood.

Having rather slid than walked down in this manner a considerable Way, you are, on a sudden, within an Inclosure of very high perpendicular Rocks, the Sky-light being admitted by two Holes in the Roof of

(3) A deep Chasm made between Hills, by repeated Torrents of Rain.

of it. In the West Side of this gloomy Apartment lies the Mouth of the Cave, which is an Hole of a considerable Bigness.

Upon our first Entrance into it, as we descended, the Light of the Day began to grow weak, and proved but a faint and uncertain Guide. Twenty Yards farther it appeared no stronger nor brighter, than the Glimmering of a Star in an hazy dull Night : A few Steps more enveloped us in a total Darkness.

*Quale per incertam lunam, sub luce maligna,
Est iter in sylvis, ubi cælum condidit umbra
Jupiter, & rebus nox abstulit atra colorem.*

VIRG.

Thus wander Travellers in Woods by Night,
By the Moon's doubtful and malignant Light :
When *Jove* in dusky Clouds involves the Skies ;
And Colours fade before their darken'd Eyes.

From hence, with the Assistance of a Candle and Lantern, I began my subterraneous Tour ; and soon after my Entrance I turned upon the Left Hand to take a View of that Branch of it called the *Dry Cave*.

The Top or Roof of this is crouded with innumerable petrefied (4) Icicles hanging downwards. The Sides of the Cave were likewise in several Places thick set therewith, especially where there was a Cavity : There they grew from the upper to the under Shelves of the Rock, like so many Balustrades, or Balusters of a Staircase, but more in Number, and irregular, sometimes in two, sometimes in threefold Divisions.

Upon breaking several of these Cones, which are of different Lengths and Magnitude, I found those hanging, from the Roof downwards, intirely perforated, and a small Quantity of the most transparent Water continually dropping through them.

The inner Circumference of these Holes was a pellucid stony Body, from Top to Bottom ; and tho' it was far from having the Lustre of a *Bristol Stone*, yet it appeared shining, transparent, and hard ; and its Parts were projected in form of Rays from the Centre to the Circumference.

By comparing these Icicles with many that I have seen in *England*, *Wales*, and *North America*, as well as those described by the Reverend Mr. *Maundrel*, found cleaving to the inner Sides of what are called *King Solomon's Aqueducts*, near *Tyre*, I find, that these Petrefactions, or con-

Q

glaciated

(4) At a Cave, in the Estate of *Reynold Alleyne*, Esq; called *Mount Standfast*, I observed Icicles different from those in *Cole's Cave* ; the latter being very large, and of a brown Colour on the Outside, the former exactly resembling, in Shape, Colour, and Bigness, the hollow Part of a middle-sized Goose-quill. Thro' these Tubes is continually distilled a small Quantity of the most transparent Water. Here likewise I saw a blunt Cone of petrefied Water, which continues daily to grow ; and the several *Striae* made by the falling Drops are visible. This resembles, in Miniature, those large petrefied Rocks of the same Shape, observed by the ingenious Dr. *Shaw* in *Barbary*, which the *Arabs* believe to be so many Tents of their Ancestors turned into Stone.

glaciated Substances, are, in general, of the same Make and Nature in every Part of the World.

The next thing remarkable in these subterraneous Apartments is the Wet Cave. This, near its first Separation from the Dry, already described, is very spacious and lofty; but its Bottom very much furrowed, and torn up, by the repeated Torrents of Rain, which in wet Seasons run through it.

Soon after we entered this, we were agreeably surpris'd with the Murmurs of a distant Stream, which a little farther we found a considerable Spring of the most transparent Water, issuing from a large projected Rock, or rather the impending Side of the Cave.

Having drunk of this, we might here again justly apply another Passage in *Virgil*:

*Intus aquæ dulces, vivoq; sedilia saxo;
Nympharumq; domus.*

A Grot is form'd beneath, with mossy Seats,
To rest the *Nereids*, and exclude the Heats.
Down thro' the Crannies of the living Walls
The crystal Streams descend in murmur'ing Falls. DRYD.

The Roof of the Cave, near this Place, is deeply and remarkably pitted with several Holes, representing shallow Cones of Diameters, from Nine to Twenty Inches, whose greatest Depth was not above Twenty-four Inches.

I imagine that these Holes owe their Origin to large cavous Icicles, which formerly hung down from them, but were broken off by some Convulsions of the Earth.

The Spring here made a small Basin, or Bathing-place; and the Air is likewise there made pure and clear by the Coldness of the Water.

From hence forwards, the Cave gradually lessened in Height and Breadth; and the Icicles hanging from the Top, and irregular Sides, were more in Number, but less in Magnitude.

Here I began to want Air; and at last the Passage became so narrow and low, that I was obliged to stoop much; and the Icicles were so small, that the longest of them did not exceed my little Finger in Length, and in Diameter.

This Place, distant near a Quarter of a Mile from the Entrance, was my *Ne plus ultra*, being so much fatigued, and wanting Air so much, that I durst not, without Presumption, proceed farther.

I cannot help fancying, that if this Cave had been situated in antient Greece, or Italy, imbrowned with Shades of Cypress Groves, and melancholy Yew, it would, in all Probability, have been the Rendezvous of all the busy and inquisitive World: Here oracular *Phæbus* had fixed

fixed his sacred *Tripas* : Here the Fate of Kingdoms, and of Empires, had been fondly consulted, and no less artfully determined : Here the Greedy and Ambitious, deluded by ambiguous Promises of Success, would have grasped fantastic Crowns and Sceptres at the Expence of real Treasures, Anxiety of Mind, and even of human Blood : And from hence perhaps the crafty Statesman would have derived divine Authority to human Laws and Institutions : In fine, *Cumæ*, and neglected *Delphi*, had never been immortalized in Verse or Prose.

As Fraud and Imposture can never bear the Testimony and Face of Day, the Heathen Priests made Choice of such gloomy and dismal Recesses for the Execution of their diabolical Collusions, as might naturally affect the Imagination with an enthusiastic Horror and Amazement ; and, at the same time, conceal from Observation those Instruments of Delusion, wherewith they were to impose on the Weakness of their infatuated Querists : And what Place could more effectually promote the Design of these Sorcerers, than such a dreadful Den of Darkness, as I have been now describing ? Where, in the Words of *Virgil*,

Horror ubiq; animos, simul ipsa silentia terrent.

All things were full of Horror and Affright,
And dreadful ev'n the Silence of the Night.

The End of the SECOND BOOK.





T H E
NATURAL HISTORY
OF THE
Island of *BARBADOS*.

B O O K III.

Of LAND ANIMALS.



NIMALS are sensitive organic Bodies, endued with spontaneous Motion.

By Animals, in the following Book, I would be understood to mean, without descending to minuter unnecessary Divisions, such only as are generally termed Quadrupeds, Volatiles, and Insects.

In each of these may be traced the Workmanship of a Divine Architecture, each formed in Number, Weight, and Measure; without Defect, without Superfluity, exactly fitted and enabled to answer the various Purposes of their Creation, to execute the Will of their Creator, to minister to the Delight and Service of Man, and to contribute to the Beauty and Harmony of the universal System.

How surprising an Instance of Almighty Power, and how wonderful a Piece of Mechanism, is to be seen in some of the minutest Animals! For Instance, the Potato-Louse, an Insect bred upon Vegetables in this Island, which is so small, that it is scarce discernible by the naked Eye!

R

Yet

Yet this is every way as perfect as an Ox, a Whale, or an Elephant. What less than infinite Wisdom and Power, could dispose a little Portion of Matter, almost too small to be viewed by the naked Eye, into that infinite Variety of Parts that are necessary to form an organic Body!

Let us consider how inexpressibly fine, slender, and delicate must the several Parts be, that are necessary to form the Organs, to proportion the Structure, to direct the Machinery, and preserve and supply the vital and animal Action, in one of these very small Animals: Yet every Part that is necessary to animal Life is as truly found in one of them, as in *Bebemoth* and *Leviathan*. I very much doubt, whether any Wisdom, but that which framed them, can fully comprehend the Structure, the Symmetry, the Beauties, of such almost imperceptible Generations: And I think it must needs exceed any finite Understanding to conceive, much less explain, how such an infinite Variety of Parts, and Exercise of Powers, could be contained or exerted within so narrow a Space.

First, The Heart, the Fountain of Life; then the Muscles, necessary to produce Motion; the Glands, for the Secretion of Juices; the Ventricle and Intestines, for digesting their Nourishment; and numberless other Parts which are necessary to form an organic Body.---This Knowledge is too wonderful and excellent for any human Understanding, when we consider, that each of those Members are themselves also "organical Bodies"; that they consist of Fibres, Membranes, Coats, Veins, Arteries, "Nerves, and numberless Springs, Tubes, and Pullies, too fine for Fancy itself to conceive."

Can we likewise form the least Guess how infinitely subtile and fine must the Parts of those Fluids be, that circulate thro' these Tubes, "as the Blood, the *Lympha*, and Animal Spirits, which in the largest Animals "are so exquisitely fine, that no Imagination can explain or conceive?"

Can any Knowledge, any Power, less than infinite, produce or explain such wonderful Effects and Appearances as these?

We may conclude therefore, that infinite Wisdom is as truly and wonderfully displayed in the smallest as in the greatest Works of the Creation; and nothing less than the same Wisdom that formed the universal System, could possibly produce the smallest and most contemptible Being in Nature.

In treating of our Animals, I shall begin with the domestic and laborious Kind.

These are much the same Breed with those of the same Species in *England*, tho' not quite so large.

Among the Distempers which infect these, there is one of a very contagious and pestilential (1) Kind; for a Beast shall seemingly, by his feeding

(1) If the Planters would make a small continual smothering Fire, with Pitch and Tar, and Vegetables of the Terebinthine Kind, to the Eastward of the Pens or Places where their Cattle are tied, and fed upon, I am of Opinion, that it might be of great Service to prevent or lessen this Distemper. The most common, and I believe the most successful Drench, given to these distempered Cattle, is the following:

Take the Quantity of an Egg of Castile Soap, a Pint of Rum, half a Pint of Lime-Juice, a Pint of Arrow-Root-Juice, and a Pint and an half of Vervain-Juice, mixed and incorporated together, and given in a Drench.

This hath often been of great Service,

N. B. The Soap must be dissolved.

ing heartily, and in Appearance, be otherwise well; yet in a few Hours time, without any Symptom of a previous Disorder, drop down and die.

These, when dead, are by the most judicious Planters immediately buried; and often there is a Watchman appointed, to prevent the new-bought Negroes, and others of the poorer sort, from digging up the Carcases, and feeding upon them; for when this happens, it generally costs them their Lives; especially if they eat the Liver, or any Part of the Entrails: In this Case the Distemper breaks out in the Shape of Plague-boils, near the Arm-pits or Temples.

I have known one very extraordinary Instance of its Virulency: A Negro Woman carrying upon her Head, in a Wicker-basket, a Piece of this Flesh, that had been newly cut off from a dead distempered Carcase, a few bloody sanious Drops fell through the Basket upon her Left Breast. In a few Hours she was swelled all over, and was not able to move a Limb; and in about Two Days there appeared mortifying Ulcers on every Part where the Drops fell: And, tho' speedy Methods were used, by Fomentations, and by several other means, to prevent its further Progress; yet neither these Cautions, nor taking off the infected Part, could put a Stop to it; at last, the whole Breast, and adjacent infected Part, were taken off close to the Bones. In this deplorable Condition the Surgeon gave her over. Her Mistress was one of those notable Women, who love to act out of their Sphere (which only an absolute Necessity can justify); who, by some accidental Success in the Use of Simples, called That Skill and Knowledge, which, with greater Propriety, might be attributed rather to good Luck: However, in this Case, where there were seemingly no Hopes of saving the Patient, she very fortunately applied to her Breast a Cataplasm of the Four following Herbs, *Smooth Elder-leaves*, *Soldier-bush*, *Dialthea*, and *Christmas-bush*, boiled and brought into a Consistency with Beeswax and Hog's-lard; and, in a short time, intirely cured her. The First of these Plants is very detergent, and the Three last very good Vulneraries.

The Sheep that are natural to this Climate, and are chiefly bred here, are hairy like Goats. To be covered with Wool, would be as prejudicial to them in these hot Climates, as it is useful in Winter Countries for Shelter and Warmth: Yet, as Cloathing is necessary (especially in the wet Seasons) to the Inhabitants of the warmest Climates, this intire Want of Wool upon all Sheep naturally bred here, is abundantly supplied by the Cotton-tree, which yearly, and in great Quantity, produces the finest Wool in the World.

Among the Number of Animals, either peculiar to, or brought to this Island, we are happy, that there is not one that is mortally venomous; whilst many of our neighbouring *French Islands* are miserably infested with Vipers, and other Snakes.

There are here but Three Reptiles that can be properly called venomous; the Black Spider, the Forty-leg, and the *Surinam Scorpion*.

The SCORPION of the LIZARD Kind.

A Full-grown Scorpion is about Ten Inches long; the Skin soft, but scaly, and of a dull Copper-colour. The very young ones are surprisingly preserved from Danger; for, when this threatens, the Parent Scorpion opens her Mouth, and swallows her Young, which she voids out again when the Danger is over.

This is not peculiar to this Animal alone; for the Shark at Sea preserves its Young in the same manner.

*The SPOTTED LIZARD; commonly called,
The POISONOUS LIZARD.*

THIS exceeds not Ten Inches in Length.

Its Head is somewhat flatter than that of the green Lizard, and the Eyes more prominent.

The Back is very thickly speckled with Rustet and White.

Its Feet differ remarkably from other Lizards, being very finely cross-indented like a File, but infinitely more curiously: By this means, as well as by a viscous Matter issuing from these spongy Indentures, they can creep along a smooth perpendicular, or even a projected Cieling.

As the Appearance of these is more disagreeable and ugly than the common green Lizard, they are, I believe, upon that account alone, called *The Poisonous Lizard*; for, upon the strictest Inquiry, I could never perceive, that they were really poisonous.

The SURINAM SCORPION.

A Full-grown Scorpion is Three Inches long from the Head to the Extremity of the Tail.

From the Fore-part of the Neck, close to the Head, rise Two Claws of about Three Quarters of an Inch long, divided into Three Joints, each Claw near its Extremity ending in a long slender whitish *Forceps*.

It hath Two Eyes, black, small, and shining; likewise Four Pair of Legs, the hindmost Pair being the longest: Each Joint of the Legs, as well as the Back, is marked with several faint whitish *Lifts*, the intermediate Space being of a rustet Colour, mixt with blackish Spots.

The Tail is divided into Six Joints: At the Extremity of the last appear two small horny, somewhat crooked, Stings or Darts, in form of a wide-extended *Forceps*, the upper being above double the Length of the lowermost: Nor are they seemingly jointed together at the Root; for the longest comes from the upper Side of the last Joint of the Tail, the other from the lowermost Part, the intermediate Space being fleshy.

When

When a *Surinam* Scorpion walks or runs, she generally curls up her Tail in a Ring; and, when provoked, she extends it to its full Length; and then with a very quick Motion darts its Sting or *Forceps* into her Adversary.

Persons who have the Misfortune to be stung by them, endure very acute Pain for several Hours; and the Flesh, near the Wound, turns generally livid: However, I have known no Instance here of its proving mortal.

Upon examining this horny Sting with a good Microscope, I could not perceive either Hole or Fissure, by which the Poison might be conveyed to the Wound: Yet, upon pressing very hard upon the Sting of an enraged Scorpion with the Blade of a Penknife, I plainly perceived a thin bluish Liquid to issue from the Extremity of the Sting, which, upon a greater Pressure, was followed by a whitish Liquid, of a thicker Consistency: The former I take to be principally the Poison that it injects into the Wound it makes, and the latter to be only the Juices of the Body.

It is the general Opinion here, as well as elsewhere, that if these Scorpions are surrounded, tho' at a Distance, with Fire, or any other way greatly molested, they will sting themselves in the Head, and immediately expire. This is attested by a great many Persons of undoubted Veracity: Yet, as this Opinion contradicts that Principle of Self-preservation, which appears to be so natural, and so general, strongly influencing the whole Brute Creation to preserve their Being, it may be justly questioned, whether the many Experiments made, in order to establish this Opinion, were attended to with that Accuracy which the Subject required.

As for my own Part, I am apt to believe, that the Heat of the surrounding Fire hath, at least sometimes, a Share in the Destruction of these Creatures upon such Experiments.

These Scorpions are chiefly to be seen among old Boards, old Books, or other loose Papers.

They never bear any Young ones but once: The She carries her Young upon her Back; and, as these grow in Strength, the Parent decays and dies.

These Scorpions are but small in this Part of the World, when compared with those in the *Spanish West-Indies*.

An Instance of the Bigness of the latter is seen in a very large one, now in the Repository of the Royal Society; which is about Eight Inches long, and every way proportionable.

The GREEN LIZARD.

THIS is of the oviparous Kind, laying small whitish Eggs, which they deposit in loose dusty Earth, where they are impregnated by the Heat of the Sun.

A full-grown Lizard, in *Barbados*, is about Ten Inches long; tho' in the Island of *Antigua* they are often above Fourteen, and in Bulk Three times as large as ours.

The Head is somewhat flattish, and hollow between the Eyes : These in all Kinds of Lizards are very prominent.

The Back is of a changeable shining Green, imbossed with small pointed Rifings, like Shagreen : It changes towards the Belly into a pale Silver White.

As Lizards are very harmless Creatures, several Authors are of Opinion, that they are, in particular, great Lovers of Mankind : And, to prove this, they assure us, that when Men in hot Countries sleep under the Shade of Trees, the Lizards will creep upon several Parts of their Bodies : Nay, so fanciful are some of these Writers, that they gravely affirm, that Lizards will leap upon a sleeping Person to awake him, if he sees a Snake approaching him; tho', upon a narrow Scrutiny, we shall find, that this seeming Familiarity and Philanthropy are the Effect of no other Principle, than that of Self-preservation ; for, as these Lizards chiefly live upon Flies, their Familiarity in creeping, or Daringness in leaping, upon a sleeping Person, is only in order to catch Flies ; which they do by creeping near, and then leaping upon, their Prey.

It is likewise supposed, that they are great Lovers of Music.

This Opinion is supported by several probable Circumstances ; for they will draw near to the Sound of any musical Instrument.

I have known one Instance myself of a Lizard drawing nearer and nearer by Degrees, and at last leaping upon the Spinnet which a Lady was playing upon.

However, I would not, from this one, perhaps casual, Instance, be supposed to draw any certain regular Inference in favour of a general Certainty of the above-mentioned Opinion.

MONKEYS.

THESE are not very numerous in this Island : They chiefly reside in inaccessible Gullies ; especially where there are many Fruit-trees.

The greatest Mischief they do to the neighbouring Planters is digging out of the Earth their Yams and Potatoes, and sometimes breaking and carrying off a great many ripe Sugar-canes.

As a Law of this Island provides a *Premium* for destroying these, as well as Racoons, they yearly rather decrease than multiply.

RATS.

THESE are so very numerous, and so very destructive to Sugar-canes, that the yearly Loss to the Inhabitants of the Parishes of St. Joseph's and St. Andrew's alone, is computed to be no less than Two or Three thousand Pounds.

That

That they are in greater Numbers in those Parishes than elsewhere, may be attributed to their hilly Situation, interspersed with high inaccessible Rocks, in whose Cavities they shelter, and there breed.

The JESSAMIN Insect.

TO this very curious Animal I am at a Loss for a Name, having neither seen it myself, nor ever heard it mentioned by any one, all the time I was in that Island. I am obliged for the following Account of it, since I came to *England*, to a (2) Gentleman, whose Veracity may be relied on, and who took one of them from a Jessamin-tree, that was against Colonel *Maynard's* House on his Estate in *St. Peter's* Parish.

The Body of it is about Three Inches long, and so nearly resembles the Bark of a Jessamin Twig, as not easily to be distinguished from it, insomuch that it may be fairly denominated from it. The Make of it is much like that of the Insect commonly called *John Cook's Horse*, excepting that this Jessamin Insect is furnished with a most curious Tongue of the Thickness of a Horse-hair, near Two Inches long, standing (as far as it hath been yet observed) always projected out of its Mouth: For the Preservation of which most extraordinary Member, as it is, on the one hand, no doubt, greatly instrumental in procuring Food for the Owner, and on the other, from its delicate Texture, liable to frequent Accidents; Nature has most kindly, and at the same time most wonderfully, formed a very curious Case or Scabbard for it out of its two Fore Feet, which were each of them hollowed exactly for the Purpose; and which that Gentleman says he saw it make use of several times, by lifting them up, extending them, and clapping them together to cover the Tongue. After observing it for several Hours, in order to preserve it perfect, it was stuck to a Board with a Pin: The Pain (as it is supposed) occasioned its laying a very small beautiful speckled Egg.

JOHN COOK'S HORSE, or HAG'S HORSE.

TH^O' this hath all its Limbs in Perfection; yet it is so shapeless an Animal, that, without a narrow Inspection, it can hardly be distinguished at first from a dry half-rotten Piece of Straw of about Three Inches long.

Its Legs, which are Four in Number, are very near as fine as those of a large Spider. It seems to be every way very inoffensive; and it is generally to be found upon Shrubs and Bushes.

A great many Negroes have a Notion, that, if they kill one of these, they will be very unlucky in breaking all Earthen Wares they handle: Of this they are so strongly persuaded, that I have seen a Negro Wench suffer a Whipping, rather than, when commanded to do it, kill one of them.

The whole Body and Legs are speckled alternately with a russet Brown, and a dull White; but not discernible at any great Distance.

From

(2) The Reverend Mr. Dowding, formerly Rector of *St. Peter's* Parish, in *Barbades*.

From the Head rise Two hairy Feelers of about an Inch long : From the Neck likewise, close to the Head, come the Two foremost Pair of Legs, which are about an Inch and a half long, and jointed in the Middle : At about an Inch farther Distance from these come the Two hindermost Legs.

The whole Body of this Animal, at about half an Inch Distance from the hindermost Legs, ends in a somewhat forked Tail.

The CAVE-BAT.

AS this hath nothing in common with Birds, but its Wings, and these differing from theirs by the Want of Plumage ; and as it likewise lays neither Eggs, nor hath a Bill, which are the chief Characteristics of Birds ; I have ventured to remove it from that Class, where many Writers have given it a Place.

The great *Bochart* observes, that its very Name in *Hebrew* is *Atalleeph*, i. e. a Bird of Darkness.

This Bat hath its Name from its Place of Residence (3).

It is often as big as a young Pigeon. Its Body is covered with a Snuff-coloured soft Hair : Its Ears are more upright, and larger, in proportion, than those of a Rat ; and its whole Head, especially its Mouth and Nose, shorter and thicker. From the Extremity of one Wing to the other extended, measures Eighteen Inches : Its Feet are guarded with Six sharp Talons, each turning inwards like Fish-hooks.

Some of the common People are of Opinion, that as Bats are always awake at Night, therefore their Flesh dried to Powder, and given to Dogs, will make them likewise watchful at Night : And this Powder is very often, by credulous People, mixed with their Food for that Purpose.

The MOUSE-BAT.

THIS is of the same Species with those in *England*. Their Wings, at the middle Joints, are provided with sharp Hooks, by which they cling to the Roof of Caves, or under the Eaves of Houses.

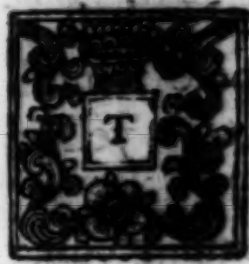
(3) From hence that Phrase in the Prophecy of *Isaiah*, Chap. ii. 20. *In that Day, i. e. in the Distress of the Israelites, shall a Man cast his Idols of Silver and Gold to the Bats and Moles, i. e. hide them in the Holes and Caverns of the Earth.*





O F

B I R D S.



THESE are, in general, divided into Terrestrial and Aquatic. An Inspection into the Structure, Nature, and Qualities of every Species will convince us, that every Individual is stamped with Marks of infinite Wisdom: And Experience teaches us, that the same Power, which at first created them, hath, and, I may venture to say, ever will preserve, not only the strongest, but the seemingly weakest, and most helpless, in a regular Succession, till Time shall be no more.

Such is the exact Symmetry, and just Proportion, observable in the Body of Animals, that every Part is subservient to the Whole. The carnivorous and rapacious Kind, such as Eagles, Hawks, and Vulturs, have strong crooked Bills, and sharp Talons, to secure and tear their Prey: But as these Birds are destructive to the more useful domestic Kind, we find that they are by far less numerous than the latter.

The melodious Notes, and the beautiful Plumage, of some, are not less pleasing, the one to the Ear, and the other to the Eye, than the Flesh of others is delicate to the Taste.

Aquatic Birds are Web-footed; and it is observable, that those that are obliged to seek their Food at a great Distance from Land, have Wings remarkably large and strong, in proportion to their Bodies, to enable them to bear the Fatigue of a long Flight.

Those which feed in the miry Skirts of muddy Ponds or Rivers, are provided with long Bills, Necks, and Legs, each being necessary either to search for, or secure, their Prey in such a Situation.

The Curious and Learned may find these Inquiries and Reflections carried on to a laudable Height by the ingenious Mr. *Willoughby*, the learned Dr. *Derham*, and others.

Neither this, nor any of our neighbouring Islands, is stored with any great Variety of Birds; and the few that we have are not remarkable for their Notes, nor (the Humming-Bird excepted) for the Beauty of their Feathers; and our tame-bred Fowls, except the *Guiney* Fowls, *Muscovy* Ducks, and rumpleless Fowls, are much the same as those in *England*.

T

GUINEY

GUINEY Fowl.

THIS is naturally a Wild-fowl, both in Taste, Appearance, and Qualities. It is at present so well known, that it would be needless to describe it.

All that I shall therefore observe is, that it is thought by some to be the same Bird so much prized by the Romans, and by them called *Gallina Mauritana*.

The Dark-coloured GAULDING.

THE Bill of this Bird is about Three Inches long, blackish, and sharp-pointed. From the Extremity of this to the Feet, extended, are Twenty-two Inches; and the Wings, extended, measure Two Feet.

The Cock hath a blue-coloured Tuft upon the Head. The Neck is of a very brownish Red, somewhat near a Snuff-colour, with a pale whitish List downwards under the Throat. The Eyes are incircled with a yellow Iris. The Feathers covering the Back are long and bluish.

The whole Bird is of the Crane-kind, and generally found feeding upon Worms about the Edges of Ponds, as well as upon Mice, Lizards, and Scorpions.

The GREY GAULDING.

THIS Bird is seldom seen in this Island, tho' very frequently at *Antigua*.

It differs from that already described, chiefly in its Bigness and Colour; this being a great deal larger, and its Colour of a greyish White.

It feeds generally upon small Crabs and Shrimps in the Salt Marshes; but we have very few, if any, such Places in this Island. We are, I suppose, for this Reason, seldom visited by these Birds.

The LESSER TURTLE-DOVE.

THE Plumage of this Bird is always of a Lead-colour, except under the Breast and Belly, where they are inclinable to a pale dark Red, especially the Cock. The Hen is generally of a lighter Colour.

This Bird, from the Tip of the Tail to the End of the Bill, is Six Inches and an half in Length, and Ten Inches to the Extremities of the Wings, extended.

They are generally very fat, and near as big as a Lark; and are justly esteemed the most delicious of any Birds in this Island, as well as perhaps inferior to few, if any, in other Parts of the World.

They feed chiefly upon *Belly-ack* Berries.

The LARGE TURTLE-DOVE.

THIS, by the regular Proportion of every Limb, completing the Harmony of the Whole, justly deserves to be reckoned among the most beautiful Birds. The Plumage of the Neck, Back, and Wings, is of a dark Lead-colour, spotted with Black; the Breast and Belly somewhat lighter.

These differ in nothing material from those of the same Species in *Palestine*, used among the *Jews* for Sacrifice (4), except in their Colour; for the Wings of the latter, as the Royal Psalmist describes them, are like Silver, which, with very little Allowance, answers to the Colour of what we now call *Arabian* or *Barbary Doves*, so common in all *Palestine*.

The Length of this Bird from the Bill to the Tail is Ten Inches, and from Wing to Wing, extended, Fifteen Inches.

COOTS, or MOOR-HENS.

THESE Birds are to be chiefly seen about the Skirts of rushy Ponds, feeding upon Pond-bugs, and such Worms; and, when there is a Scarcity of these, they alight upon, or most commonly climb up, Plantain, Banana, or Guava Trees, and feed upon the ripe Fruit, as well as sometimes upon Pulse and Potatoes.

They are distinguished into Three Kinds; the White, the Red, and the Blue-pated. The Bill of each is strait and strong, and of a greenish yellow Colour near the Point; the other Part of a florid Red; the Whole about an Inch long.

The Crown of the Head, but especially near the setting on of the Bill, instead of Feathers, is covered with a white, blue, or red tough Skin, of a circular Form, about the Bigness of an *English* Silver Groat.

The Plumage under the Neck and Breast is of a very deep Blue, inclineable to a Purple. The Feathers on the Back are of a greenish Lead-colour. From the Extremity of one Wing to another, it measures Eighteen Inches, and the Length from the Bill to the Feet, Fifteen. The under Feathers of the Tail are Snow-white. Its Legs are yellow. It hath Three Toes before, and one behind, guarded with strong Claws.

The TWO-PENY CHICK.

THIS Bird hath a strong yellowish sharp-pointed Bill, near an Inch long: Its Length from this to the Feet, extended, is Nine Inches; and from the Extremity of the Wings, Eleven.

The Head is marked from the Bill to the hinder Part of it, with a black List. The Back and small Feathers upon the Wings with pale Rust, set,

(4) We find that the Heathens had a Notion, that the most perfect ought to be used in Sacrifice. This is evident from *Homer*; for, when *Achilles* speaks about the Sacrifice to *Apollo*, he says,

ἀρνῶν κνίσαν αἰγῶν τε τελαίων.

set, or rather dark-coloured Olive, intermixed with black and white Lifts. The Breast is of a pale Dove-colour, growing whitish, and more speckled towards the Belly.

Its Legs are long, in proportion to its Bulk; and of a greenish yellow Colour: It hath Three Toes before, and One behind, each bordered with a scalloped lateral Membrane to assist in Swimming.

This Bird dives with such Quickness, that it is very difficult to be shot. It is of the Bigness, and much of the Colour, of the *American Quail*.

The THRUSH.

WE have Two Species of Thrushes in this Island; the one much resembling in her Note the *English Thrush*.

As soon as the Day appears, she mounts up like a Lark into the Air, almost out of Sight.

The other is a solitary Bird, and is known by the Name of the *Quaking Thrush*.

The COTTON-TREE-BIRD.

THIS is a yellowish Bird, about the Bigness of a small Sparrow; and is chiefly to be seen among Cotton-trees.

The BLACK-BIRD.

THE Plumage of this is of a glossy Black: Its Bill is likewise black and strong; of a somewhat triangular Shape, and near an Inch long.

The Eyes are surrounded with a white *Iris*, as well as provided with a white Membrane, which, at Will, covers the whole outward *Superficies* of the Eye, both to keep it from Harm, and perhaps to keep it moist in so warm a Climate.

Its Length, from the Extremity of the Bill to that of the Tail, is Seven Inches; and from the Extremities of the Wings, extended, Eleven.

These Birds are very numerous in this Island (tho' there are none at *Antigua*), and in some other Leeward Islands.

They are serviceable in destroying Crickets, and other Vermin: Yet this scarce compensates for the Ravage they make in consuming our *Indian* and *Guiney* Corn; the former chiefly when young; the latter, soon after it is planted, as well as when ripe.

The GOLDFINCH.

THIS beautiful Bird is somewhat bigger than a large Sparrow; and is seldom, if ever, seen, except in the Months of *December* or *January*; and then generally in the most woody and easterly Part of the Island.

The

The only one that I saw was in the Plantation of *Richard Estwick, Esq;*
The Head is of a fine Orange-colour, and the rest of the Body of a dark Colour, except upon the Pinions, where the Feathers are of a deep Red.

The PIVET.

ALTHO' this Bird feeds upon Fruit, its Bill is of the same Make with those of the carnivorous Kind; and it intirely subsists by Berries, or such-like Fruit of Trees.

It is no small Instance of the Wisdom of Providence, that there is not a Month in the Year, but some Trees, or Shrubs, bear ripe Fruit of one kind or other; so that these have literally their Food provided for them in due Season.

A Pivet is about the Bigness and Colour of our largest Kind of Sparrows, and hath a wild chirping Note.

They are chiefly to be seen where there is the most Variety of ripe Fruit.

The WREN.

THIS, excepting its Note and Bill, differs very little from the Thrush, as to its Plumage and Bigness: Its Bill is somewhat more sharp-pointed and longer, than that of the Thrush.

It is most commonly to be seen in the Wood near *Hackleton's Clift*, and feeds chiefly upon Oranges, and such ripe Fruit, as well as upon Lizards.

The SPANISH LACKER.

THIS differs very little, if any thing, from a Pivet, but by its Note. It feeds chiefly upon Poison-tree Berries, and such wild Fruit.

This Bird is most commonly to be seen near *Hackleton's Clift*.

The PARAKITE.

THIS is of the frugivorous Kind, and about the Bigness of a Thrush, having a longer and more crooked Bill.

It feeds upon almost all manner of Berries, Popaws, and ripe Plantain, residing chiefly in inaccessible Gullies.

The Bird borrows its Name from its Resemblance in Make, but not in Plumage, to the small green Parakite.

The SWALLOW.

AS the Make of this Bird every way answers the Description of those of the same Species in *England*, it would be needless to describe it. The Cause of the Disappearance of the whole Species, during the Winter Months,

Months, hath been variously represented by most Authors of Natural History.

Some have, with great seeming Probability, attributed their State of Insensibility, or at least their Absence at that time, to the wise Dispensation of Providence, in making these Birds incapable of any of the Functions of Life, at a Season of the Year when they could not be supplied with their daily and proper Food, which consists chiefly of Pond-flies, Butterflies, and Bees.

This ingenious Hypothesis hath a great Appearance of Truth, and is indeed the best that can be given in a Northern Climate, where it is evident that their Food can only be found in Summer Months: But this their recluse Life, from *October* to *March*, is no less evident, than it is almost general in this Island; in which Months their Prey is no less plentiful, and the Weather but very little colder, than in our Summer: Yet they retire to their Holes in the Rocks, and do not appear during these Months, except in very small Numbers.

The SUGAR-BIRD.

THIS derives its Name from its frequenting and picking up the loose Sugar about the Sugar-curing Houses, and elsewhere.

The SPARROW.

OUR largest Sparrow differs very little from those in *England*, being of a pale reddish Lead-colour, Four Inches long from the Bill to the Feet, extended; and Seven Inches over the Wings, from the Extremity of one to the Extremity of the other.

Its Bill is very strong and sharp-pointed; its Legs blackish; and its Feet have Three Claws before, and One behind.

The LESSER SPARROW.

THIS likewise, called the *Tinker-Sparrow*, differs very little from the former, except in Bigness; this now described being less.

The HUMMING-BIRD.

THIS Bird derives its Name from the humming Noise it makes as it flies.

Pliny justly observes, *Natura nusquam magis quam in minimis tota est*: This is sufficiently evinced in the Make and Qualities of this, which is the smallest of Birds; for what it wants in Strength and Bigness, is sufficiently made up in its Swiftness in Flying, and its Dexterity in making use of its sharp Bill; by which means it is capable of overcoming the largest and strongest Bird that flies in these Parts of the World.

This

This Species of Birds are distinguished into the large and small Sort.

One of the latter, which I have now before me, weighs but Forty-eight Grains. From the Tip of one Wing to the opposite, extended, is Five Inches; and its Length, from the Tail to the Extremity of its Bill, near Four: Its Feet are composed of Three Claws before, and One behind. The Feathers under the Belly, the Tail, and the long Quill-feathers, are of a sooty Black: Those which cover the Back and Neck have a fine Mixture of Green: The Bill is about half an Inch long, and black: The Tongue, which is about an Inch long, is forked. This, darted into the Blossoms, sucks up the Honey-dew from most Flowers: There are a few Feathers, which jut out higher than the rest, a little above the Bill, of an almost inimitable shining Green: A little higher up stands erect another Feather of a flaming Purple: These look very beautiful, especially when reflected to the Eye by the Rays of the Sun.

The other Sort have a longer Bill, and are every way considerably larger than this now described.

These Birds make their Nests under the Eaves of Houses thatched with Straw, or in the Boughs of shady Trees: These Nests are very artfully made, composed of Straw, Hair, and Cotton, which last covers the Inside.

I have seen one of the Nests, which was very extraordinary; for it was worked quite round the under Part of the Twig, to secure the Nest, which was above: Had it been tied round with a String of any sort, it would not have been so strong. What was very particular in it was, that the Nest was not built amongst small Twigs or Leaves, but upon the upper Part of a single Branch, perfectly free from all Leaves or Twigs.

The Female lays Two small Eggs, somewhat bigger than the largest Pea, and longer.

I have taken several young ones when fledged, and endeavoured to raise them; but never could effect it; for no Art can prepare a Liquid so nourishing as that which the Parent Bird extracts from the Flowers.

The SMALL YELLOW-BIRD.

THIS is a very small Bird, whose Plumage hath a beautiful Mixture of Yellow and Red, especially about the Head.

BIRDS of PASSAGE.

WE cannot sufficiently admire the Wisdom of Providence in enduing these with a Sagacity proper to know their stated Seasons to migrate from perhaps a colder Climate to warmer, or from a Scarcity of Food in one Place to a Plenty in another, but more especially at the approaching Season for breeding.

What afforded me this last Hint, and induced me to believe, that their Migration is chiefly about that Time, was, that some Years ago there came
up

u a prodigious Number of these Birds late on *Saturday* Night, and alighted on a small Spot of Pasture-Land: A neighbouring Constable prevented their being disturbed on *Sunday*, during which time they were observed to be almost incessantly treading.

Their Flight is always from the South-west towards the East: But what seems most surprising is, that they direct their Course, unvaried, and unbyassed either by contrary Winds or Storms, over wide-extended Oceans, reaching yearly to their respective Stations, with an Exactness scarce credible to an heedless Observer; tho', after the most diligent Search into the anatomical Structure of their Bodies, there can be found no Analogy between their several Organs, and those designed in the human Species, for those exalted Ends of Thinking, and providently Reasoning.

Therefore the sublimest Genius must, with Humility, own, that we know but in Part; and that by searching we cannot (till God is pleased farther to unveil his now secret, tho' always wise Ends) find out the Causes and Effects of several *Phænomena*, which future Ages may possibly discover.

Most of these Birds of Passage never fail to appear here between the Nineteenth and the Twenty-seventh of *August*, especially if it be then wet Weather; but if about that time it is very dry, the greatest Part of them are seen to fly very high, and to keep their direct Course towards the East; and, as *Milton* expresses it,

-- -- In Figure wedge their Way,
Intelligent of Seasons; and set forth
Their airy Caravan, high over Seas
Flying, and over Lands; with mutual Wing
Easing their Flight: So steers the prudent Crane
Her annual Voyage, borne on Winds: The Air
Floats as they pass, fann'd with unnumber'd Plumes.

The WILD WOOD-PIGEON.

THIS is about the Bigness of an House-Pigeon.

The Head is of a blackish Colour; and, from the under Bill to the Breast, of a light Mouse-colour; from thence to the Belly and the under Part of the Tail, of an Ash-colour; the upper Side of the Neck, Back, and Wings, of a dark Ash-colour, growing lighter towards the Extremities of the Wings.

These come hither, tho' in no great Number, about the latter End of *July* or *August*, always alighting upon Trees, and feeding upon the Berries of them.

The

The WILD-DUCK.

THE very few that migrate to this Island, of this Kind, are of the same Make and Species with those in *England*.

The TEAL.

AS this differs little, or not at all, from those in *England*, it will not be necessary to give a particular Description of it.

It will be sufficient to observe, that in *England* they are seen every Winter, tho' hither they come but once a Year, and very few in Number; and some Years there are none at all.

The CROOKED-BILL CURLIEU.

THE Bills of every Species of Curleus are somewhat crooked; but of this more than any other: From thence therefore it derived its Name.

Its Bill is about Five Inches long; the Head small, in proportion to the Body; the Neck long and slender; as are likewise the Legs.

Its Feet have each Three Toes before, and One behind.

The Feathers of the Head, Neck, Back, and Wings, are thickly speckled with blackish, russet, and white Spots.

The Length from the Tip of the Bill to the End of the Tail is Eleven Inches; and from the Extremity of each Wing, extended, Fifteen Inches.

It weighs, when fat, about Three Quarters of a Pound, and sometimes more.

This, among the rest of the Birds of Passage, visits this Island in the latter End of *July* and *August*; especially if we have any Southerly Winds, and rainy Weather, at that time.

The SHIVERING CURLIEU.

THESE, as well as most other Curleus, often come over in great Flocks.

They are next in Bigness to the Crooked-bill Curleus, having their Feathers on the Back, Breast, and Tail, of a brownish Red, slightly streaked with Black.

The STONE CURLIEU.

THIS is somewhat smaller than the last described, and marked with larger and blacker Spots upon the Back, having likewise some of the Pen-feathers in their Wings, as well as some of the Tail-feathers white.

These feed most commonly on the Sea-shore; and therefore have a Taste somewhat fishy.

The BLACK-BREAST PLOVER.

TH O' all the Species of Plovers, that make their periodical Visits to this Island, are more or less speckled; yet as this is more remarkably so, and as they are by far more numerous than any other Species, I shall begin with its Description.

The Length of this from the Tip of the Bill, which is about an Inch long, to the End of the Tail, is Nine Inches; and the Breadth over the Wings, extended, Eighteen.

The Head is somewhat large, in proportion to its Body.

The whole Bird is speckled all over with white and black Spots.

The RING-NECKED PLOVER.

THIS is much less than the Sandy-breast; and derives its Name from a white Ring incircling its Neck.

The Colour of the Feathers upon the Back is not so much speckled as the large Plover already described.

This, as well as the other Plovers, has no hinder Claw; so that they cannot alight upon Trees.

The SANDY-BREAST PLOVER.

THIS differs chiefly from that already described, by being somewhat smaller, and the Colour of its Breast not speckled, as in the former, but of a pale White.

The Head of this is somewhat less than the other, and more proportionable to its Body.

They likewise come somewhat later to the Island than the speckled Sort.

This is about Eight Inches long from the Bill to the End of the Tail, and Sixteen over the Wings, extended.

Of the MOPUSES.

TH E R E are three Sorts of these, distinguished into the Large and Small, and the Hiding Mopus.

The latter, which is the biggest, derives its Name from its immediately concealing itself, as soon as it alights, in swampy wet Places, amongst Rushes or Sedge-grass; nor will they attempt to rise, till you come very near them. Their Bill is Two Inches long; from this to the Extremity of the Tail is Ten Inches; and over the Wings, extended, Fourteen. The Feathers upon the Back are of a reddish Brown, marked lengthways with black Lifts.

The Two other Kinds of Mopuses are lesser than this, differing not in Colour, or in scarce any other Circumstance, except that these do not conceal themselves, but alight often in open Grounds, and in Flocks.

The

The LONG-LEGS.

THESE are distinguished into the large and the small Kind, both differing from the Plover, in having a hind Claw.

The largest, which is called the *Cackling Plover*, weighs often near Seven Ounces.

They derive their Name from the Length of their Legs.

Nature hath given these, as well as all other Birds that seek their Food in muddy wet Skirts of Ponds, long Legs, Necks, and Bills, these being absolutely necessary in such a Situation; their Legs to prevent their sinking in the Mud; and the Length of their Bills enabling them to penetrate deep into the Mire, in Search of Worms and Fish, which are their Food.

The GREAT SNIPE.

THERE are several Species of Snipes, that come in the wet Seasons to this Island.

These are distinguished by many uncertain and different Names, as well as Marks; tho' the real Difference between so many is but small.

I shall therefore reduce them into the large and small Sort.

The LITTLE SNIPE.

THIS is likewise called a Nit.

The Name was perhaps given them from their very diminutive Size, when out of Feathers; for they then seldom weigh above two Ounces each.

A few of these are to be seen here in every Month of the Year, without any Regard to the periodical Season.

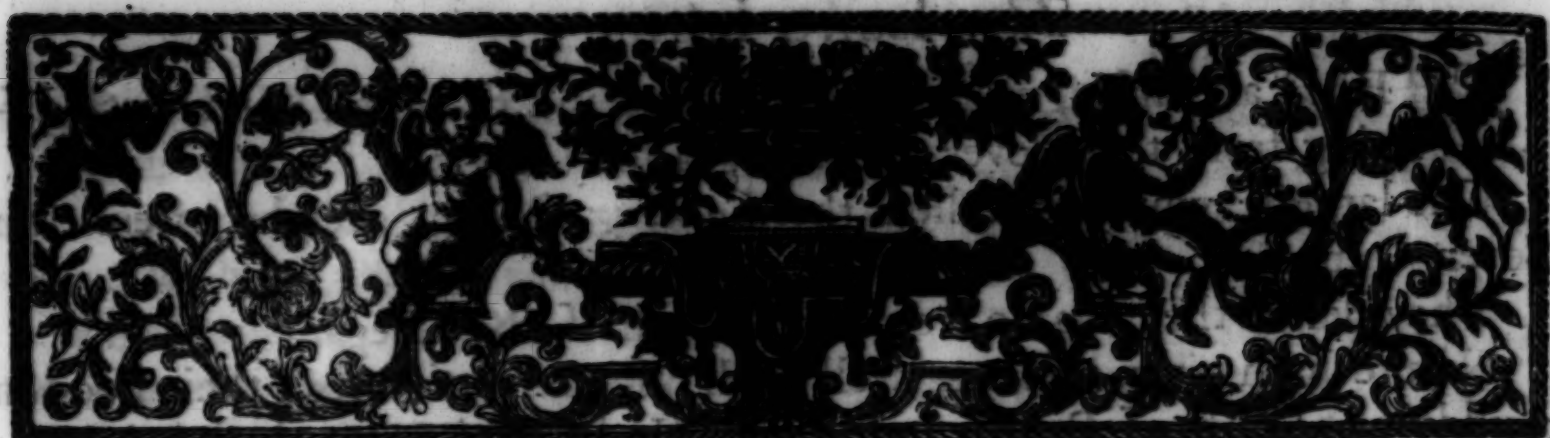
They are of a greyish Colour, speckled with Black upon the Back and Wings, and the Breast and Belly of a whitish Colour.

Their Length from the Tip of the Bill to the Feet, extended, is Six Inches; and, over the Wings, Nine.

These feed generally about the Skirts of Ponds.



THE LARGE BLACK BIRD.



O F FLYING INSECTS.



H O' unthinking and incurious People may look upon these to be the most useless Part of the Animal Creation ; yet, upon a narrow Inspection into the Use of every Species, we find a providential Design, in not only their Make and Qualities, but likewise in the Time and Season of their Appearance, which never happens till so late in the Spring, that he, who *filletb every thing living with Plenteousness*, hath provided them with Leaves of Trees, their proper Food, whilst in their reptile State.

They likewise at that Season (except what Providence reserves to continue and propagate the Species) become exceedingly useful, being then the destined necessary Food of young Birds.

But, when these crawling Worms come to their full Growth, they spin; and, after a wonderful manner, inwrap themselves in a Tomb of their own making.

Here they rest for a while ; and, in a short time after, they break thro' this temporary Prison, and become Butterflies.

In this State, decked in all the gaudy Pride of Colours, they wanton in the Air ; and, by their careless irregular Flights, seem to have scarce any other Business in Life, but sportive Diversions. This perhaps may be intended by Providence to make Amends for the short Duration of their Existence.

Flies, likewise, especially those of the smaller Kind, are a very useful Part of the Creation ; especially as they are in the Summer Season the most common Food of Fresh-water Fish.

The LARGE BLACK BEE.

THIS is the largest that we have here of the Bee-kind. The Head is large and flattish.

The lower Part of it, somewhat about the Mouth, is provided with a strong *Forceps* : With this it makes deep Holes in several Kinds of dry soft

soft Timber, which serve as a Shelter from the Weather, as well as Nests to deposit their Honey, and rear their Young in.

In the upper Part of the Mouth there is a Dart, or rather *Proboscis*, pointing perpendicularly downwards: This is about a Quarter of an Inch long, black and shining; and, as the above-mentioned Nippers or *Forcipes* were designed to bore Holes in Trees, so this, by being divided, or capable of opening as a *Forceps*, may perhaps be designed to take and kill its Prey; for I always found their opposite Sides to be hollow, capable of retaining the Juices of their Prey, with this additional Conveniency, that, from the Centre between these Two Claspers, darts out a bearded reddish Tongue.

Its Eyes, which are Two, are small, shining, and hemispherical, situated near the upper Part of the Head, for the Conveniency of seeing before, as well as behind.

Below these stand Two Horns, or Feelers, of about an Inch long.

The Back is black and shining, joined by a strong Ligament to the *Abdomen*, which is made up of Six *Annuli*, or Sections.

The Rapidity of its Flight depends upon Four glossy Wings.

The Body, likewise, when upon the Ground, is supported by Eight shaggy, or rather hairy Legs, each ending in a Claw or Fork. The Two hindmost and opposite Legs being the longest, these about the Thighs are generally loaded with a granulated yellow Substance, like Bees-bread.

The Extremity of the *Abdomen* is guarded with a black Bee-like Sting.

This Bee makes an humming Noise as it flies.

The MASTICH-FLY.

THIS is about an Inch and a Quarter long, and of a glossy purple Colour, inclinable to a Green.

It hath Two Feelers, each Five Inches long. It derives its Name from the Tree it feeds upon.

The COCK-ROCH.

THE Body of this Fly is near an Inch long, and somewhat flattish, and of a very dark Snuff-colour.

It lays many small brownish Eggs.

It flies about in the Evenings, especially in wet Weather, and generally into the Houses, where they breed, and are very troublesome, being voracious of most kinds of dressed Victuals, as well as destructive to Cloaths, Books, or any kind of Paper, by gnawing it to Pieces; besides they are very offensive, by the stinking Smell they leave behind upon every thing they touch, especially Meat: So that the Words of *Virgil* may be justly applied to these:

*Diripiuntque dapes, contactuque omnia fœdant
Immundo. - - - - -*

Y

The

The best Method of destroying them is to grind to Powder the Backbone of a Gar-fish, and then mix it with something that they like best to feed upon: If they eat of this Mixture, they generally die.

It is said, that the *Abdomen*, boiled in Oil, and poured into the Ear, cures the Patient of any aching or throbbing Pain.

The FIRE-FLY, or JACK LANTERN.

THESE Flies, which are of the Glow-worm Kind, are in great Number in *North-America* upon the Continent; but in the warmer Climates so very rare, that I have never seen any in this Island; tho' I am credibly informed, that they are sometimes to be found here.

The KNOCKER.

THIS Fly is somewhat larger and blacker than a Cock-Roch; and derives its Name from the tinkling Noise it makes.

The Head and Back are hard and shining; the former divided from the latter by a broad close Joint.

As it bends its Head backward, the upper Joint falls as a regular Spring into the Socket of the lower; and, when it bows its Head forward, it opens with a sharp tinkling Note, as the Spring of the outward Case of a Watch, when pressed,

The HARD-BACK.

THIS Fly is about half an Inch long, having a very small Head, provided with Two small Feelers.

Its Eyes are round, black, and shining; the Neck thick, and speckled with White and Black: Its membranaceous Wings are defended with Sheaths, or Shell-wings.

Without such a Covering, the exquisitely fine Texture of the Wings would continually be liable to be torn by the least Touch of an harder Substance, such as the Blades of Canes, Corn, or the Branches of Trees.

Its Body is supported by Six Legs: Each of these, near the Extremity, is divided into Three close Joints, white, and flat underneath: These are very finely cross-indented, like the Surface of a File.

Besides, each Foot ends in a sharp, somewhat crooked Point; by which means it strongly grasps its Prey.

FIDDLERS.

THIS Fly, in Shape, Colour, and Number of Legs, much resembles a Cock-Roch, except that it is smaller, and longer, in proportion to its Bulk.

It

It is called a Fiddler from the shrill Noise it makes, when held and squeezed between the Fingers.

It generally flies about in the Evening.

The CUCKOLD-FLY.

THIS is of the Beetle-kind, of about half an Inch long, and of a dark-red Colour.

The Back and *Abdomen* are covered with a Pair of hard Wings, or rather Covers for its membranaceous Wings, which are large, and of an elegant fine Texture. The Head, Neck, and *Abdomen*, are closely joined together.

It is supported by Four Legs on each Side ; and flies chiefly in the Dusk of the Evening.

The CARRION or FLESH-FLY.

THIS is the same with the common Carrion-fly in *England* ; at least, it differs in no material Circumstance.

The MASON-FLY.

IT is called a *Mason*, from the great Quantity of Mire and Morter which it carries into Houses and elsewhere, wherewith to build its Nests, which it generally does on the Cielings, or the Roofs.

In these Nests, which are above an Inch long, they lay Two or Three Eggs ; and then carry in a great Number of young Spiders ; and afterwards close up the Entrance into the Nests with Clay.

From each Egg, thus deposited, there is in time hatched a small white Maggot, which feeds upon the Spiders, till it comes to its *Aurelia*-state : Then they spin and wrap themselves up in a tough Bag, or Web, till they turn into young *Masons*.

The BAT-FLY.

THE Original of this is a Tobacco or a Fig-tree Worm ; for this, after its *Aurelia*-state, turns into this Fly, which is about an Inch and a Quarter long.

The Head is guarded with a Pair of Horns, or Feelers, finely indented, about Three Quarters of an Inch in Length.

Its Two Eyes are large, spherical, and black.

The Back, as well as the *Abdomen*, which is divided into Six *Annuli*, is of a reddish-yellow Colour, covered with a soft whitish Down.

It

It hath Two Pair of membranaceous Wings, the upper by far larger than the under.

From its Mouth it darts a twirling *Proboscis*, with which it sucks the Honey-dew from most Flowers, but especially from Nightshade-flowers.

Its Legs are Four, Two on each Side.

If kept confined in a Box, or otherwise, it turns from a Fly-bat into a long black Worm, such as is found in the Earth in Potato-ground.

The BUONAVISTA CHINK.

THIS is a small green flattish Fly, which generally feeds upon the green Pods of *Buonavista*; and smells, when killed, like a Bug. It is very destructive to several Kinds of Pulse.

The POND-FLY.

THIS is an Inch and an half long, and of different Colours.

The Head, near the Mouth, is of a light Sea-green.

The Mouth is provided with Two Pair of Nippers, or *Forcipes*, with which it destroys its Prey.

The Eyes, being Two, are very large, prominent, and shining; and of an oval Form.

The Head is fixed to the Body by a very slender Ligament.

Its Breast is likewise very prominent, as well as the opposite Part of the Back high and convex; the upper Part of which supports Four narrow membranaceous Wings.

The whole Body is strait, about an Inch long, and ends in a forked Tail, which is alternately spotted with Green and Black.

It hath Six Legs, the hindmost by far the longest; the lower Part of each being thickly covered with stiff Hairs, the Extremity of each Foot being forked.

The Wings above-mentioned are narrow, and a full Inch long; the Texture resembling a Sea-feather, but infinitely finer.

The POPE-FLY.

THIS Insect is better known to the Inhabitants, by the great Destruction it causes in almost every sort of Grain, than by its Shape; for it spares neither Pulse nor Grain of any kind, if they have been for any considerable time gathered in.

However, in general, they resemble a Wevil in their Make.

The LOCUST, called here, the Ash-coloured GRASHOPPER.

THIS is about Two Inches long.

Its Eyes are black and oval.

The Head is provided with Two hairy Feelers, and is covered, as far as the Back, with an hard unpliant Cowl, streaked with Ruffet and Black.

Its

Its Wings are large, in proportion to the Body; and of a greyish-ruflet Colour.

The Body is supported by Three Pair of Legs; the hinder, with which he springs or jumps, are about Two Inches and an half long.

The Thighs, which are of a ruflet Colour, finely polished, and stained with black Lifts, extending lengthways, are of an hexagonal Form; and the Legs are elegantly studded with a great many white small Prickles, set on, like the Teeth of a Saw, alternately.

This Kind of Grasshopper is generally to be seen among the Blades of Sugar-canes; and, when the *Guiney* Corn is ripe, they feed much upon it.

The most ignorant and superstitious of the Inhabitants are very apprehensive of some approaching Illness to the Family, whenever they fly into their Houses in the Evening, or in the Night.

There were bred, or came to the Island, such vast Swarms of these in the Year 1734-5. that they destroyed almost every green tender Plant. So great was the Destruction that they caused, especially among the Potato-Vines, upon whose Roots the poor People chiefly subsist, and such the Scarcity of Food, occasioned thereby, especially in *St. Philip's* Parish; that there was a Collection made for the Sufferers thro' the rest of the Island. These differ not in their Make from the Locusts that are to be seen in the Repositories of the Curious.

The GREEN GRASSHOPPER.

THIS is somewhat less than the Ash-coloured Grasshopper already described; but differs in no other material Circumstance.

The BLACK-SPOTTED BUTTERFLY.

THIS is larger than any hereafter described.

Its Wings have a few pale-red and whitish Spots intermixed with the Black.

The GREENISH-YELLOW BUTTERFLY.

THIS is about Three-quarters of an Inch long.

The Back is covered with a soft greenish Down.

The *Abdomen* is divided into several *Annuli*, or Sections, tho' scarce perceivable.

Its *Antennæ* are about half an Inch long, and its Legs Six in Number.

It hath Four very thin membranaceous Wings, covered with a fine yellow Mealiness.

This mealy Dust, when viewed thro' a Microscope, appears to be so many regular Quills, feathered with the utmost Exactness and Proportion.

The Body of this, as well as of the following ones, is decked with a Profusion of Beauty : And all, in the Words of the great Milton,

- - - - - wave their limber Fans
For Wings, and smallest Lineaments, exact
In all the Liv'ries deck'd of Summer's Pride,
With Spots of Gold and Purple, Azure and Green.

Should any one impertinently ask, What Use these are of in the Creation ? it may be answered, in the Words of the ingenious Mr. Ray, that they are designed *ad ornatum universi, & ut hominibus spectaculo sint ; ad rura illustranda, velut tot bractæ, inservientes. Quis enim eximiam earum pulcritudinem & varietatem contemplans mira voluptate non afficiatur ? Quis tot colorum & schematum elegantias naturæ ipsius ingenio excogitatas, & artificii penicillo depictas, curiosis oculis intuens, divinæ artis vestigia eis impressa non agnoscat & miretur ?*

The WHITE BUTTERFLY.

THIS exactly resembles the last described, in every Particular, except its Colour.

These are chiefly to be seen flying about Ponds of stagnated Waters in the most beaten Roads.

The DARK-RED BLACK-SPOTTED BUTTERFLY.

THIS is about an Inch long, from the Head to the Tail.

Its *Antennæ* are Three-quarters of an Inch long ; and its Two Eyes black, round, and shining.

The Wings are of a dirty Red, irregularly impanelled with black Lifts ; and the Margin or Border of each Wing much darker than the rest ; and here-and-there adorned with many white Spots, as well as the Head, Back, and Breast.

The *Abdomen* is of a dark ferrugineous Colour, and composed of Seven *Annuli*.

The CLINKER, or GULLY-BELL.

THIS is of the Cricket-kind, and derives its Name from the tinkling Noise it makes at Night, which much resembles the shrill Note of any musical Instrument.

This Noise, which is repeated Three or Four times without ceasing, may, in a still Evening, be heard above an Hundred Yards off.

But as these Creatures live generally in inaccessible Gullies, they are very seldom, if ever, caught ; and therefore their Shape is known but to very few, much less the Cause of so surprising and regular a Note.

The

The LONG-SPOTTED FLY or LADY-BIRD.

THIS Fly exceeds not half an Inch in Length.

Its Back and Head are finely spotted with Red : The intermediate Spaces are of a russet Colour.

There is likewise a small red Lady-bird generally to be seen upon Ochra-leaves.

The GOLDEN LADY-BIRD.

THIS very beautiful Insect is very seldom seen.

It is about the Bigness of the last described.

Its Head, Wings, and Feet are, as it were, covered with burnished Gold.

The CANE-FLY.

THIS is a small whitish Fly, with Two membranaceous Wings.

It is chiefly to be seen among thick-planted ripe Canes.

The CORN-FLY.

THIS is a smaller Fly than the last, and is to be seen hovering over

Heaps of *Guiney* Corn, when in the Granaries.

Its Colour is much the same as that of the last-mentioned.

The MUSCHETTO-FLY.

THIS derives its Name from *Musca*, a general Name in the *Latin* Language for a Fly.

Perhaps the Name of *Merry-wing*, applied to another Fly, from the Noise it makes with its Wings, would be more properly applied to this, if the Acceptation of the Word had not rendered it almost universal, at least among *English* Writers.

WEVILS.

THIS is so commonly found in decayed Corn and Flour in every

Part of the World, that it scarce deserves a particular Description.

It is a black scaly Fly, of near a Quarter of an Inch long.

The MERRY-WING.

THIS is a very minute Fly, very troublesome, especially in calm Mornings and Evenings, to those Inhabitants who live on a sandy Soil near the Sea.

They

They seem to be exactly of the same Species with the Gnat in *England*.

They swarm upon the Face and Hands, as well as upon every other Part of the Skin exposed to the Air; and almost in an Instant dart a small *Proboscis* from their Mouths, and penetrate so deep as to draw Blood, leaving generally an angry little Tumor behind.

As the Wind rises, they are no more to be seen, except behind Doors or Window-shutters, till the Return of the calm Mornings or Evenings, not being able to stand against the Wind that blows in the Day-time.

Of REPTILES and INSECTS.

THE former are denominated from their creeping or crawling upon their Bellies, either with Feet, as the Caterpillers, or without Feet, as the Snakes and Earth-worms.

The latter are likewise generally divided into Aquatic and Terrestrial.

These, tho' often vile in Appearance, yet all of them, in their several Ranks and Stations, proclaim aloud the Wisdom and Power of their Creator.

Their Variety, their Dispositions, their Sagacity, their Policy, their Industry, the wonderful Proportion of their Organs, the Delicacy of their Structure, and a Thousand other Curiosities, observable in every Species, are Matter of wonderful Delight and Pleasure to a curious and inquisitive Genius: But, were we able to examine them in a nearer View; could we be capable of knowing all the direct Purposes of infinite Wisdom in their Creation, in the Relation they bear, and the harmonious Proportion they stand in, to the universal System; it would afford us endless Matter of Astonishment and Surprise, as well as of religious Reverence and Adoration to their omnipotent Creator.

Tho' small and contemptible they appear to us, they are really formed with the most exquisite Symmetry, the most delicate Proportion. An attentive Eye, assisted with the Use of Microscopes, discovers in them astonishing Marks of Wisdom, arming, cloathing, and accommodating them with all the Instruments and Faculties necessary to their Condition.

The SNAKE.

WE have but one Species of the Snake-kind in this Island, of which I have not seen above Seven in Seven Years.

The largest that I saw was not above Three Feet long.

They are not at all hurtful, except to young Pigeons and Poultry, or small Birds, Mice, &c.

I cannot here omit a remarkable Instance of Superstition of a Negro, with regard to one of those Snakes.

A Man

A Man who had killed one of these, happened to be afflicted with the Rheumatism soon after, especially in his Arm: He then immediately concluded, that it was a Punishment upon him for killing the Snake: He persuaded himself, that the different Degrees of Intenseness of the Pain he felt in his Arms, were exactly in proportion to the Pain he gave the Snake. It hath been his Custom ever since, by way of Atonement, to feed all the Snakes that come near his Hut, with some Offals of his Repast, and Water; especially the latter, which he daily puts in the most likely Place for them to find.

The FORTY-LEGS.

THIS takes its Name from the Number of its Feet, being every way much of the same Make with what we call in *England* *Multipes*, or *Centipes*; but those here are far larger, being sometimes Four Inches long.

The Back is of a dark Copper, scaly and jointed, the several *Annuli* being equal in Number to the opposite Feet.

The Head is guarded with a Pair of hairy Feelers, and a strong *Forceps*: This they can open or extend above a Quarter of an Inch wide, and again close it very nimbly together, either to hold its Prey, or annoy its Enemy.

The Forty-Legs often lay above an Hundred small white Eggs, which are deposited in an Hole in the Ground, generally under a loose Stone: Round these the Female coils herself, until they are hatched: If at that time she is disturbed, she immediately swallows her Young.

The old ones, among other things, feed upon young Cock-Roches and Spiders.

The Bite of a Forty-Leg is very painful for at least an Hour, or sometimes a great deal longer.

There are some of these Vermin that are slightly tinged with a bluish Colour: These are smaller than the above-mentioned, and more poisonous.

The Forty-Legs in *Surinam* are a great deal larger than what are bred in *Barbados*. Of this we may see an Instance in the Repository of the Royal Society.

The INDIAN-ROOT CATERPILLER.

THIS Worm feeds upon the Leaves of that Plant which we call here the *Indian Root*.

It is generally about Two Inches long.

Its Head is guarded with Two black soft Horns or Feelers, of about a Quarter of an Inch long.

The different *Annuli*, or Joints of the Back, are streaked with yellowish and whitish Lifts. The Tail-part hath likewise a black Pair of Feelers, or Horns.

This from its *Aurelia*-state turns into a reddish Butterfly.

The FIELD CRICKET.

THIS is about Three-quarters of an Inch long, and of a dark-brown Colour; the Head and Body closely joined together.

Its Two Eyes are oval and prominent.

From under these rise Two half-inch long hairy Feelers.

The *Abdomen* is divided into many *Annuli*; and from its Extremity issues a Spear of half an Inch long, and on each Side of it Two other shorter Darts.

Its Two upper brown shining Wings, or rather Coverings, guard Two other membranaceous ones.

Its Legs are Six in Number, Three on a Side; the hinder Pair being strong, and of a great Length, in proportion to the rest: The smaller Parts of this Pair are thickly and regularly studded with small sharp Teeth, like those of a Saw.

The Breast and Thighs are of a dark-yellowish Colour.

What is most remarkable in this kind of Cricket is, that it not only produces its own Likeness from Eggs; but that it gives Birth also to another Animal, quite different in its Nature from the Cricket itself: For the small wriggling Worms, which are about Seven or Eight Inches long, and often to be seen in standing Water, and by the Vulgar supposed to be animated Horfehair, and therefore called *Horfehair Snakes*; these are evidently propagated by Crickets; since they are found in them, and have been often observed to be voided by them (when fit to shift for themselves) thro' the *Anus*: These afterwards are cherished by the Heat of the Sun, and grow to the Length above-mentioned, and I suppose lay Eggs before they die.

These may be, and, in all Probability, are, picked up by the Crickets, whose Bodies prove a proper *Nidus* for them: By this very surprising fostering Care is this Species preserved.

These Crickets are generally to be met with under loose Stones, and Clods of Earth; and are much coveted by Poultry of every Kind.

The ASH-COLOURED, or SICKLY CRICKET.

THIS is near One-third larger, especially in the Length of its Legs, than either the Field, or the House-Cricket; and, if pursued, secures itself more by running, than by taking starting Leaps, which is always the Refuge of the Two other Sorts; tho' this, if in Danger, saves itself at last by the same Method.

This Kind makes a disagreeable screaming Noise; and some of the Inhabitants are so weak as to believe, that, when their unwelcome Sound is heard in their Houses, it is an Omen of Death to some of the Family.

The HOUSE-CRICKET.

THIS differs very little, if any thing, in Shape, from the Field-Cricket already described, except that the Noise it makes is loud and purring.

When they make this Noise, I have observed their Position to be standing very upright upon their Legs, with their Wings extended archwise, the middle Part swelling from their Bodies, and their Extremities touching them near the lower Part of the *Abdomen*.

The FLY-CATCHER.

THIS is of the Spider-kind, differing from it chiefly by a Pair of *Forcipes*, which rise from each Side of the Neck.

It hath Four Legs on each Side.

They jump or dart forward often full Ten Inches, to seize the Flies, which are their Prey.

The HOUSE-SPIDER.

THIS is a dark-brown hairy Spider, having a large Head joined to the *Abdomen* by a slender Ligament.

The Body is supported by Eight Legs; the Two foremost extending above Two Inches asunder.

Near the Mouth come out Two short, tho' strong, Feelers.

It carries its Young in a white small Bag under its Belly.

Tho' the Sight of these Spiders is not agreeable; yet are they serviceable in Houses, by destroying Cock-Roches, which are both offensive by their Smell, and destructive to Victuals, Cloaths, and Books.

The FIELD-SPIDER.

THIS very much resembles those of the same Species in *England*.

The FLAT-BACK'D SPIDER.

THIS, in the Number of its Legs, and the Make of its *Forceps*, resembles the *Italian* Tarantula; differing chiefly in the Number of its Eyes, which in the latter are Eight, in the former Two.

The Bite of this is very near as painful as the Stinging of the *Surinam* Scorpion, causing an immediate Swelling, with acute throbbing Pain, which continues for several Hours without Intermission.

The GOLDEN SPIDER.

THIS is called the *Golden Spider*, from the bright Gold-colour Lifts, with which its Legs, and some Part of the Body, are marked.

It

It spins its Web in the open Air, generally, among the Branches of the large *American Torch-thistle*.

The SLENDER-LEGG'D SPIDER.

THIS spins a Web, and very much resembles that so often found among Hay or Stubble-ground in *England*, in Harvest-time.

The POTATO-LOUSE.

THIS is a small reddish Insect, scarce perceptible to the naked Eye: Yet, when viewed thro' a Microscope, it is evident, that its external and internal Parts, whether we consider the Disposition of its Limbs, or the curious inward Fabric of its Heart, Lungs, Veins, and Arteries, are as regular, and as perfect, as the largest Elephant, or the huge *Leviathan*.

Had *Pliny* known the Use of Microscopes, with what greater Justice, Surprise, and Admiration, would he have said, *In magnis siquidem corporibus facilis officina sequaci materia fuit : in his tam parvis, atq; tam nullis, quæ ratio, quanta vis, quam inexplicabilis perfectio* (5) !

The INDIAN CORN-WORM.

THIS is a short thick Worm, preying upon the Pith in the Inside of the Stalk, and by this means rendering the Ear at the Top very imperfect, having scarce any Grain on it.

The EARTH-WORM.

THIS differs, at least to the naked Eye, in nothing from the Earth-Worms in *England*.

The GROUND-ASS, or the LION-PISMIRE.

THIS is of the Colour of an Hog-Louse; in Length about a Quarter of an Inch.

The Back is convex, not ill resembling the Back of a Tortoise in Miniature; but somewhat longer in proportion.

The Head is small and long, when compared to the Bulk of the Body.

This is supported by Six Legs, the Pair next the Shoulder being the longest.

What is most remarkable in this Animal, is its Motion, which is always retrograde; and this not by walking, but by quick Starts, springing back.

These generally live in very loose Dust or Sand, under Logs of Wood of such Coverings: In these Places they artfully make a circular Hole of about

(5) *Pliny*, Lib. XI. Cap. II.

about an Inch Diameter, of a Funnel-shape; in the Centre of which this Creature lies unseen, watchfully waiting for his Prey.

As soon as an Ant, or sometimes a Fly, walks upon or near the circular Brink of this Hole, the Lion-Pismire either sees his Prey, or more probably hath Notice of it, by some Grains of Dust falling to the Centre: He then, by a sudden Start, at the Bottom, undermines the dusty Sides of the whole Fabric: Then the Prey upon the Brink falls precipitately, with the falling Dust of this shelving Funnel, into the Centre: Whilst the Prey is thus immersed in Dust, he ceases his Work, and devours it; and soon after repairs to his Cell, and lies concealed like a Spider in the Centre of it, till the next Prey calls him forth to repeat his unhospitable Talents.

This Animal is well described in *Speſtacle de la Nature*.

The WOOD-ANTS.

THE Wood-Ants are the most pernicious of all others, being so very destructive to Timber of most sorts, that, if not prevented, they will in a few Years time destroy the whole Roof of an House, especially if it be soft Timber.

They have likewise caused great Losses to Shopkeepers, by boring Holes thro' whole Bales of Linen, as well as Woolen Cloths.

They are very expeditious in building their Nests, which are long hollow Tubes, the Outside being an Incrustation of a gritty clayey Matter.

The Method of destroying them is, to make a small Hole near the upper End of the Nests, and pour into it a little Arsenic, which generally kills those that are present; and the rest, that follow, eat up the Carcases of the slain, and almost instantly swell, burst, and die.

The GREAT-HEADED ANT.

THE Head of this (which is joined to the Body by a small Ligature) is very large, in proportion to the Bulk of the Body.

It no-way differs from the last described, but by the Bigness of its Head, from whence it derived its Name.

The SMALL RED ANT.

THIS is a very small Ant: Yet the Part of the Skin it bites continues painful for near Four Hours afterwards.

If these are likewise killed, and rubbed upon the Skin, they raise a Blister.

The Bodies of these Ants are thickly covered with sharp fine-pointed Bristles, imperceptible to the naked Eye.

The STINGING ANT.

THIS appears to be the same with what is to be seen in *England* in the Summer Season in most Pasture-Lands.

The HORSE-ANT.

THIS is the largest-sized Ant, and is often to be met with both within and without Doors; and hath nothing peculiar in its Make or Qualities.

The SUGAR-ANT.

THIS is a small whitish Ant, very fond of Sugar, or any sweet and oily Liquids; and consequently very troublesome to good Housewives, it being difficult to keep them from every kind of Victuals.

The WINGED ANT.

THO' there are scarce any Nests of Ants of any Kind but have some winged Ants among them, which are esteemed the She-Ants; yet, when we speak of these as distinct from the several other already described, we may observe, that they generally live under-ground, and are seldom seen to come out of their Holes but in rainy Weather.

The LAND-SNAIL.

THESE are generally of an Ash-colour, or black: The latter is rather a Distinction of Age than Species.

These are chiefly to be seen among green Herbage, especially Potato-Vines.

The SMALL SPIRAL SNAIL.

THESE are not above half an Inch long, very slender, and sharp-pointed.

The Colour of the Shell is of a russet Grey.

They are often found cleaving to the Bark of large Cotton-trees.

The DUNG-SNAIL.

THESE are very small, and resemble, in Appearance, a flat crusty Wart, or some such Excrecence.

The small Part is very soft, when compared to any other of the Snail-kind.

The Inside likewise is of a tough, reddish, Jelly-like Consistence.

They stick to, feed upon, and thus destroy, several Kinds of succulent Vines, especially the Granadillo-Vines.

HAVING now taken a View of the Brute-Animal Part of the Creation, let us turn our Thoughts to the great Author of all Beings; and gratefully acknowledge his Bounty, in making Man the Lord over the Whole: Let us admire that Wisdom, which is always present to every one of them, supports and governs them.

And

And lest, upon Comparison with their supposed Meanness, we should think too highly of our own Knowledge ; lest our scanty Portion of Wisdom and Power make us vain ; let us make a Comparison between ourselves and our Creator.

After this Survey we shall find very little Occasion of Boasting ; we shall find, that our greatest Knowledge is but splendid Ignorance ; and that we see no farther than the Surface and the Outside of Things, as directed by the general Laws of Motion. All beyond this is mere Guess-work, Conjecture, and Uncertainty.

Let the wisest Man go out of himself, and survey the immense Extent of Nature, the Variety of its Works, the Regularity of its Motions, and the Harmony of Providence ; and let him seriously pronounce, how little is his real Knowledge, how great his Ignorance !

Let him take a Prospect of the vast Dimensions of those astonishing Heaps of Matter, that lie within the Reach of his Senses : Let him consider the stupendous Motion that agitates the vast Mass of Matter, and whirls about the numberless Bodies, that take their Courses thro' the unmeasurable Space ; and carry his Thoughts into that Immensity, where Imagination itself can find no Limits : Let him consider that infinite Duration, which is before and after him ; and, finding his own Life included in it, let him observe the little Scantling of it, that falls to his Share.

It is just to acknowledge (what hath been undesignedly omitted), that some of the above Reflections, as well as Part of those in Page 88. are owing to the learned Mr. *Hildrop's* Works.

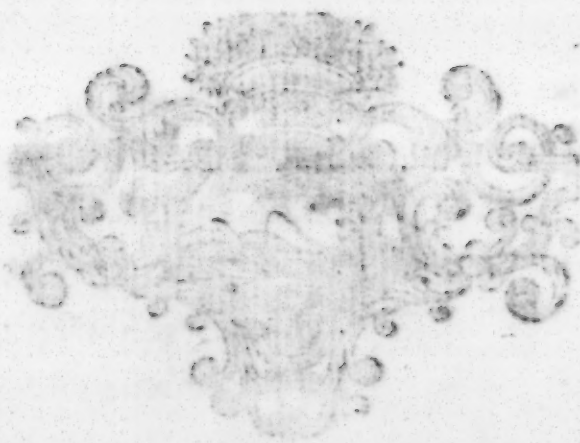
The End of the THIRD BOOK.



THE

It is true, that our greatest knowledge is in the splendid ignorance; and that we see no further than the surface and the outside of things, as is shown by the general laws of Motion. All beyond this is a mere guess.

The End of the Third Book.



THE
NATURAL HISTORY
OF THE
Island of *BARBADOS*.
BOOK IV.
Of VEGETABLES.



IN treating of these useful and beautiful Parts of the Creation, I shall take particular Notice of such as are curious in their Make, or useful in their Physical, or other remarkable Qualities: And when I am obliged to differ materially, or circumstantially, from other Writers, it is with no other View but that of discovering the Truth; and after the joint laborious Inquiries of the past, as well as the present Age, into so extensive a Subject, we may still say with *Seneca*, *Multa venientis ævi populus ignota nobis sciet. Multa seculis tunc, cum memoria nostri exoleverit, reservantur*; i. e. "Many are those Secrets which are hid in Obscurity from the present Age, and are reserved to bless Posterity with their Discoveries."

In our Inquiries into this Part of the Creation, we shall be entertained with an agreeable Mixture of Knowledge, Profit, and Pleasure. We shall find

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find every Individual replete with unerring Design, Elegancy, and Wisdom, each contributing to the Harmony of the Whole.

The Eye is ravished with beholding the majestic Height, and agreeable Verdure, of some ; whilst the Flowers of others delight us with their Profusion of Sweets, and varied Beauties : And, could our Eyes attain to the Sight of the admirable Texture of the Parts, on which the specific Difference in Plants depends, what an amazing and beautiful Scene of inimitable Embroidery should we behold ! What Variety of masterly Strokes of Machinery ! What evident Marks of consummate Wisdom should we be entertained with ! The little that we do know of their Make and Structure is surprising !

What Power less than Divine could provide them with such Number and Variety of Vessels, endued with dilating and contracting Qualities, capable, by Expansion, to give room to the excrementitious Juices to fly off, and by Contraction to force back their remaining unconcocted Parts to be purified by a farther Circulation and Secretion !

How greatly are we at a Loss, even to conjecture, much more explain, how an Aloe-Plant, and a Sugar-Cane, tho' planted in the same Tub of Earth, and absorbing the same common Juices ; yet each shall concoct these Juices, so as to render them suitable to their respective Natures ; the one producing a very sweet, the other the most bitter of Juices !

If from the amazing Structure, and Inimitable Beauty, of Plants, we explore their other Uses, we shall find their great Author's Bounty, not, like the Patriarch's, confined to one Blessing, but as boundless as the World : These are not only pleasant to the Eye, but good for Food. The Delicacy and Poignancy of their Fruits, the Fragrancy of their Gums, Oils, and Balsams, their healing Qualities, and the grateful Taste of their Juices in Liquors—all proclaim, that these are thy Works, O God ! and convince us, that in Wisdom thou hast made them all.

As this Treatise, with regard to Vegetables, is confined within a narrow Sphere, it cannot be supposed to comprise Rules for a regular System of Botany ; nor doth it therefore require me to descend to every minute Circumstance necessary, and expected only to be expatiated upon by those who undertake to write Botanic Systems.

The Method I have taken, in classing the Plants by their Fruits, is, I hope, the shortest and plainest, and consequently the most to be understood by common Readers.

It would perhaps seem an invidious Task every where to particularize many of those lesser Circumstances, wherein I am obliged to differ from other Authors. Mr. Miller, of *Oxford*, as far as he hath seen our *West-India* Plants, hath described them with great Judgment and Accuracy.

As to my *West-India* Readers, when these shall compare my Descriptions with the Originals, they must do me and themselves the Justice to choose Specimens from perfect Plants, growing in such a Situation as they naturally love : For the same Species of Plants, which would flourish, and grow

grow luxuriant, in a particular Soil, or in the Shade, might perhaps be scarce kept alive, if too much exposed to the Sun, or unnaturally situated: Nor are Specimens from Hot-houses in cold Climates to be depended upon; for the Inconstancy of artificial Heat, causing sudden Transitions from the required natural Degree of Heat to unnatural Cold, frequently occasions great Alterations in them. This, among many other Instances, may be clearly seen in the irregular Growth of the *American Torch* in most Green-houses.

And, indeed, after all our Accuracy, it must be owned, that as the Growth of Plants depends so much, even in their natural Climates, upon the different and uncertain Seasons of the Year, it would be more rash than judicious to pretend absolutely to ascertain the determinate Size of the Leaves, or the exact Growth of any Species of Plants.

Nor is the Colour of the same Plant always the same. Thus the young Leaves of the Sea-side Grape are intirely red; but, when old, altogether green, except the middle and transverse Ribs.

It will likewise be of Use to observe, that as, in the Infancy of settling this Island, Caprice and Chance had a greater Share, than Botanic Skill and Judgment, in imposing Names upon our Vegetables; several of our Plants have many and different Names in different Parts of the Island.

With this Caution to my Readers, I shall, I hope, not only myself escape the Charge of Omissions, but they will likewise avoid that Confusion, which would otherwise, in the Course of this Work, be almost unavoidable.

As to our several Trees, Shrubs, and Plants, that abound with Oil, Gums, or Balsams; the curious Inquirer must likewise take Notice, that these, generally speaking, are not to be expected but from Vegetables that are full-grown, and at particular Seasons of the Year.

After all my expensive Care and Trouble, and a strict Attachment to Truth in all my Observations; yet I make no doubt but this Treatise hath many unavoidable Imperfections. For, to speak with the Poet,

*Whoever thinks a faultless Piece to see,
Thinks what ne'er was, nor is, nor e'er shall be.*

POPE'S Essay on Crit.



Of NUCIFEROUS TREES, SHRUBS, and PLANTS.

TH^O these are not generally esteemed among the most delicious Fruits; yet the Kernels of many of them are not only agreeable to the Taste, but valuable also for the great Quantity of Oil they afford; nor are they designed for the Use of Man only, but likewise to be the most common, and almost the peculiar Food of a certain Species of (1) Animals.

Those who think meanly of this, or any Part of the Creation, are generally Men of narrow Conceptions, and scanty Knowledge, which barely skims over the Surface of Things.

Hence arises that partial Judgment, which would confine the Goodness of God, as the (2) *Syrians* of old would his Power, within narrow and local Bounds.

These short-sighted Observers consider not, that the Chain, of which they see but a Part, reaches to the Ends of the Earth.

When we extend our Views, and give our Inquiries a greater Scope, the more will our Ideas be enlarged, when we find the common Father of All, every-where present, pouring forth his Blessings with a bountiful Profusion; then every distinct Part, which we had before inadvertently looked upon as mean and trivial, will gradually rise in our Esteem, and appear in its native Beauty.

For Instance; Let an Inhabitant of a Northern Climate, where these Fruits we are treating of, are not very inviting to the Palate, trace the different Species of this kind into other Regions, growing under the benign Influence of a warmer Sun; let him examine the various Species which the lofty Palms alone produce, and he will find them no less numerous than useful, till he comes at last to the most remarkable and valuable of all others, the *Coco-nut*.

When he sees and considers the admirable Texture of the Whole of this surprising Fruit, especially the thick husky Covering with which it is cased, to prevent the piercing Rays of the Sun from absorbing the limpid Water it contains, so grateful to Man, and so necessary to give Rise and Nourishment to its delicious Kernel: This, and its Growth, will appear still more wonderful, as well as more replete with Wisdom and Goodness; especially when he considers the Situation of those Countries, and the Soil wherein they generally grow; and how great will his Admiration be, when he finds, that Providence hath ordained these to thrive and flourish in the most barren and sandy Deserts of *Ethiopia, Africa, and Arabia*, where Nature denies almost every other Herbage!

Let us likewise (at least in Imagination) follow our Fellow-Creatures the Inhabitants of these Climates; let us fancy we view the fainting Traveller passing thro' these inhospitable Deserts, where neither a grateful Verdure cheers the Eye, nor the Murmurs of even a distant Stream the Ear; view him hungry and thirsty, doubting, murmuring, and almost saying aloud with the *Israelites*, *Can God find Food in the Wilderness?* when, on a sudden, some intervening Hillock is past, which forbids the pleasing Prospect; a

(1) Squirrels. (2) 1 Kings xx. 23.

thick Grove of these Trees appears. The Beauty of their grateful Verdure, their waving Follage, and the cool Shade which they promise, infuse fresh Vigour; a few Moments more he is reclined under its welcome Shade, and there refreshed with the most delightful Viands these Nuts afford.

Thus, as in the respective Stages of human Life, Providence hath provided Pleasures and Enjoyments suitable to every distinct Period of it; so in every Climate the same unerring Hand hath adapted to each, by Weight and Measure, its proper peculiar Advantages, generally far overbalancing its Inconveniencies.

If *Egypt* is denied the refreshing Rains; the *Nile* supplies that seeming Want: If *Palæstine* is not blessed with such a providential Alotment; yet its Hills and Valleys copiously drink of the Dew of Heaven: The Hills, by their high Summits, arrest the passing Clouds, and cause them to descend on the Valleys in the former and the latter Rain.

Where dreary Deserts deny Support to the generous Horse, there the laborious Camel, patient of great Labour, and long Thirst, is adapted by Nature to bear the Wants and Fatigues of Journeys thro' such Sun-burnt Regions.

In short, were we capable of taking a general Survey of the Face of Nature, we should find, that Providence hath enriched every Climate with Blessings peculiar to itself, and adapted to the Necessities of its Inhabitants; and for this Reason we may conclude, that the Abundance of Coco Nut-trees found in this Island, and such Places, was graciously calculated and intended for the Comfort and Refreshment of those whom Providence hath there placed.

The DATE-TREE.

THIS Tree grows to a considerable Height, often Fifty Feet.

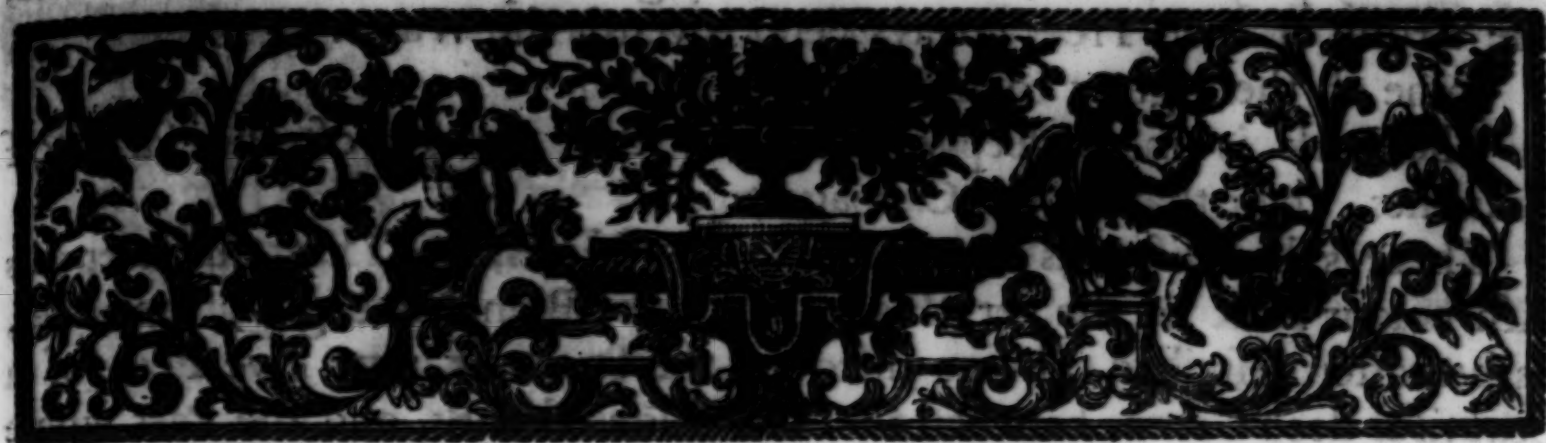
Its Leaves much resemble those of the Cabbage-tree; but their *Pinnæ* are harder, and aculeated.

The Branches, as well as the Spines or middle Ribs of the Leaves, are guarded with Three-inch-long triangular Prickles, always channelled on one Side.

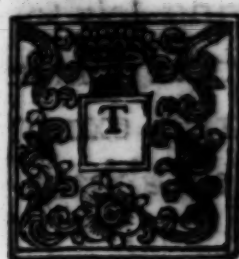
The straightest and youngest Branches which grow near the Summit of the Tree, are much used here by the *Jews*, upon their Feast of the Tabernacles: These they usually gild, and adorn them with variegated Flowers, and then carry them in Procession to their Synagogue. Whether this is the same kind of Palm that was used by the *Israelites*, we know not, or whether it is not here succedaneously used as bearing the nearest Resemblance to it. The Branches are set on *squammation*, leaving, when they fall, very deep Impressions upon the Trunk.

The Dates grow in large spiral Clusters, about the Bigness and Shape of a middling Olive; but never come to the Perfection here of being eatable; for they have a very austere and acerb Taste; yet the Swine feed upon them greedily: This crude rough Acidity of the Fruit shews, that they have a great deal of essential Salts.

T H E



T H E

COCO NUT-TREE ; *Lat. PALMA NUCIFERA.*

HO' every Part of this Tree, either in its Make or Use, is stamped with so many evident Signatures of Divine Wisdom, as to make it justly the Object of our Admiration ; yet, in describing it, we ought not to add to it (as most Writers have done) pretended Qualities, and Excellencies foreign to its Nature.

For as the Light of the Sun cannot be heightened by that of a Candle, so neither can the perfect Works of God require the Aid of our weak, much less false Embellishments, to set them forth in a stronger and more advantageous Light, lest he should say unto us, Who requireth this Thing at your Hand ?

As the ingenious Mr. *Ray* was one of the first Persons of Character who was imposed upon, most other Authors since his Time, depending upon his Description, have represented this Tree as actually capable of, and really producing, Bread, Water, Wine, Vinegar, Brandy, Oil, Honey, Cups, Spoons, Besoms, Masts, Nails, Needles, and Covering for Houses.

But, since many of these Qualities are merely chimerical, I shall endeavour to describe this Tree according to its outward Appearance, and real Properties.

Its Roots are many, very much resembling, in Colour, Make, Texture, and Extent, those of the Cabbage-tree, being very small, and many in Number.

The Trunk of this likewise somewhat resembles the former, having near the Top, surrounding the Heart of the Tree, many Flakes of that eatable Cabbage-like Substance.

But the Body of this Tree hath no Claim to a just Proportion in Growth, being often near as thick at Thirty Feet high, as it is within Three Feet from the Ground ; and it generally leans one Way or another, occasioned, in some measure, by the great Weight of Nuts it sustains whilst young, which determines the bending of the Tree, which Side

D d

foever

soever they project ; and, if likewise they grow upon the Brink of a Pond, the Trunk of such Trees always bend towards the Water.

Some of them grow to Sixty Feet high.

The Bark is more deeply pitted by the *Vestigia* of the fallen-off Branches, than that of the Cabbage-tree.

There is likewise this very remarkable Difference : That this keeps its Ash-colour Bark to the very Place where the Branches begin ; the other, as hereafter described, always discovers the Space of near Five Feet, of a beautiful deep Green, between the Ash-coloured Bark, and the Part where the Branches begin : The lowermost Branches likewise in a Cabbage-tree expand almost horizontally ; whereas those of a Coco Nut-tree bend more wavingly and irregular.

The Branches come to their full Growth in about Three Months, and are, in a flourishing Tree, about Twenty-eight in Number.

Every Branch hath a great Number of pennated Leaves : These are of different Size, the largest always near the Trunk, and growing less towards the Extremity of the Branches : The former are often near Three Feet long, and resemble, in their Make, those of the Cabbage-tree, except that they want those strong Thread-like Filaments, which the Cabbage-leaves afford.

And as the Branches of the Coco Nut-tree are often about Fifteen Feet long, they would be liable to be broken down by high Winds, especially those that are pressed upon by the Weight of the large Bunches of Coco Nuts. Indulgent Nature hath therefore fortified and wrapped the Footstalks of every Branch with a strong, close-woven, reticulated, web-like Substance arising from the Tree. This Substance is of a reddish Colour.

What is farther remarkable in this is, that it becomes peculiarly adapted to the different Growth of the Branches ; for, as these increase in their Growth, by easy gentle Degrees, this Web, tho' of a very strong Consistence, is yet so elastic and pliable, that, growing with the Branch, it never prevents its Growth by too close a Bandage, nor suffers it to be liable to the Injuries of Storms by too lax a Stricture.

This Contrivance of Nature (if I may use so low an Expression) is not only curious in its web-like Make ; but, being often a Foot and an half long, may, where extreme Necessity calls for such Shifts, be capable of being sewed together, and made into a kind of Garment, which would at least keep off the Heat of the Sun : And this is the most probable Pretension the Writers of Wonders have, to say that this Tree affords Cloaths.

As to its being fit for Masts of Vessels ; this is a most preposterous Supposition, or rather an Imposition upon Mankind ; for, without being well versed in Sea Affairs, every one is sensible, that a Mast of any Vessel ought to be, and always is, made tapering from the Bottom to the Top ; whereas this Tree is, for the most part, almost as thick at the setting on of the Leaves, as it is near the Ground : And as the Inside is soft and
pithy,

pithy, and its whole Strength consisting in the outward strong ligneous Part, which is not above Two Inches thick; this prevents the Possibility of its being made tapering by the Use of Tools.

As to many other of its pretended Qualities, they are as groundless as this.

But to return to my Subject: This Tree, if planted in a rich sandy Soil, will begin to bear Fruit in the Fourth or Fifth Year; sometimes not so soon, if the Soil and Situation are not indulgent to the Nature of the Tree.

Its first Appearance of bearing Fruit is a ligneous, pod-like, husky *Spatha*, of about Two Feet long, and about Three Inches broad, narrower towards its Footstalk than towards its Extremity. The Whole is of a brownish Green on the Outside, and white within: It comes to its full Growth in Three Months from its first Appearance.

As the Foot-stalk is continued thro' this husky *Spatha*, there it wreaths and twines itself, as well as its partitional surrounding Twigs, into many Bendings. When the Pod comes to its Maturity, it bursts in the Middle, on the upper Side; and the inclosed Twigs appear thick-set with pale-white Flowers, inclinable to a yellow Colour.

Each of these are composed of Three rigid sharp-pointed Leaves.

From the Middle of these rise Six yellow *Stamnia*, with a short whitish Style, cleft at the Top into Three Parts: These Flowers have a weak faint Smell; and, in about Five Days from their first Appearance, they fall to the Ground: Then the Nuts, by degrees, are formed: These, when young, are round, and their Shell of a soft Texture. The outward husky Covering is of a somewhat reddish Colour; each Nut round the Footstalk being closely embraced with the *Calyx*, which is composed of many stiff roundish Leaves, which closely stick to the Nut, like so many laminated Scales.

The Cavity in the Nut, whilst thus young, is narrow and small, growing both larger and rounder with Age.

Each Nut, on the Part next the Stem, hath in it Three Holes closely stopped; one of these being both wider, and more easily penetrated, than the rest: From this, when the Nut is planted, rises the *Germen*, or young Tree: Thro' these Holes likewise is the Water copiously distilled into the Nut from the Roots of the Tree. This is evident from the Saltness of the Liquor in these Nuts, if the Tree grows near a brackish Spring; but, if they are planted in an agreeable Soil, the more sandy and loose, the better. The Water in young Nuts is very limpid, and extremely sweet.

When the Kernel begins to grow, it incrusts the Inside of the Nut in a bluish jelly-like Substance: As this grows harder, the inclosed Liquid becomes somewhat acid, but still of a sweetish agreeable Taste, and far more palatable than any Mixture of these Two Ingredients from the best of Artists.

As

As the Nut ripens, the Kernel becomes still more solid; and lines at last the whole Inside of the Nut for above a Quarter of an Inch thick, as white as Snow, and of the Flavour of an Almond.

These Nuts, when at their full Growth, which they generally are in Six Months after their first Appearance, contain from half a Pint to sometimes above a Pint of the above-mentioned Liquor.

In about Three Months after the Kernel is in its full Perfection, the husky or outward Coat of the Nut, in a short time, begins to be somewhat shriveled; and the Nut soon after falls from the Tree. This happens in the Tenth Month from its first Appearance.

In this Stage the whole Fruit is of a blunt oblong Shape, near, and often above, a Foot in Length, and otherwise proportionable: The Outside is likewise bluntly marked in a triangular manner: The husky Part, which covers the Nut, for near an Inch thick, is of a pale Brown on the Surface, and of a reddish Colour within. This consists of so many strong stringy Filaments running lengthwise, that it is not without Difficulty separated from the Nut; but when taken off, and cleared of the intermixed pithy Substance, it then resembles coarse Oakum; and it is so called by most Authors, and may perhaps, in Cases of Necessity, be used as such.

The Nut likewise, when cleared of its husky Tegument, appears slightly marked on the Outside with Three Sutures, the whole Nut being of a blackish Colour.

If these are planted, the Kernel will, some time after, first bud, and ramify, and fill the whole Cavity of the Nut; and then shoot out at the above-mentioned Hole in the Top, and soon appear above-ground in Two narrow Leaves.

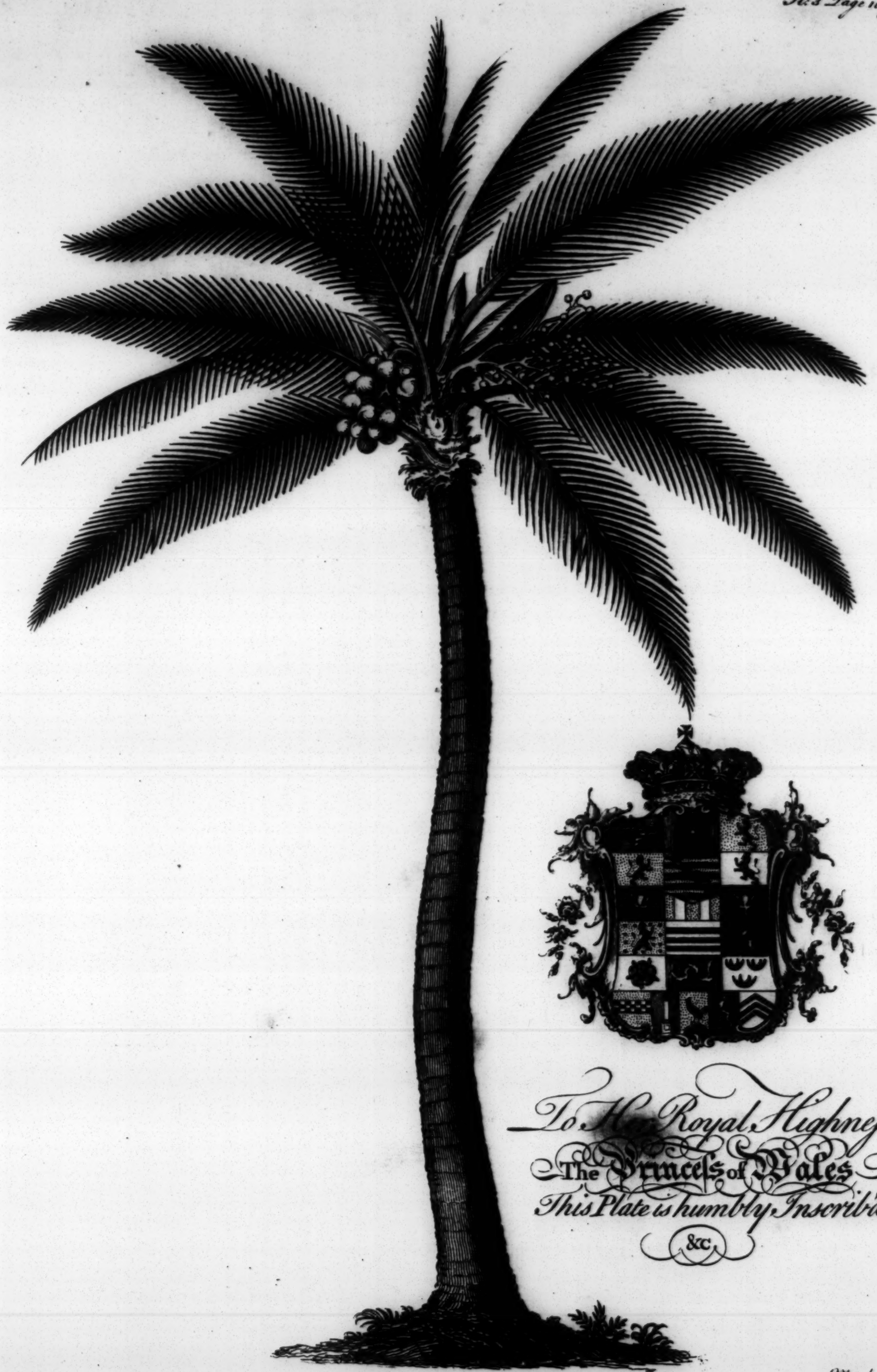
As the Kernels of most Nuts are more or less pregnant with Oil, it will perhaps be here worth observing, that tho' Oils in general, when in the common Way extracted, are not miscible with Water; yet they may be brought to mingle with it in the Form of Cream.

For Instance; Let any Quantity of Coco Nut-kernel be pounded in a Mortar, with a Quantity of Water sufficient to penetrate into the broken Interstices of the Kernel: This, being again mixed with a great Quantity of Water, and suffered to settle for a few Hours, will necessarily contract a white creamy Substance upon the Surface, in which Form the Oil then appears.

Its Parts, by being thus pounded, and absorbed in the branny Substance of the Kernel, and mixt with Water, are rendered too small to cohere, and to form visible Drops.

On the other hand, if the Oil, drawn from the Kernel by Expression, be shaken ever so much in Water, it will almost instantaneously collect its separated Parts, and form itself into its genuine tenacious oily Drops; Which Oil, when first expressed, is very mild, and of an insipid Taste; but in a few Days, unless kept very cool, which is scarce practicable in hot Climates, it will become rancid.

The



To His Royal Highness
The Prince of Wales
This Plate is humbly Inscrib'd
&c.

The great *Boerhaave* observes, that the fresh Oil of Sweet-Almonds, taken in a *Linctus*, proves an excellent Emollient, where the *Fauces* are grown rough with an *Angina*: And yet, if the same should be taken by a Person in Health, after it had stood in the Heat of a Summer's Day, it would corrode and inflame them. Add to this, that the sweeter these Oils are, when fresh, the more acrid they are, when they are old and rancid.

Hence the same ingenious Author observes, how abominable are Almonds, Walnuts, and Pistach-nuts, when they once become rancid; and how easily they will cause an *Angina*, and raise a Fever, by inflaming the Throat, Oesophagus, Stomach, and Intestines.

How inexcusable therefore must those Practitioners in Physic here be, who for the above Purposes use the rancid Oil of Almonds, when they might every Day extract the best and sweetest of Oils from the Coco Nut-kernel!

From this seeming Digression, concerning the Nature of Oils, we may proceed to observe, that, if the Liquor in the Nut be first fermented, I make no doubt of its producing, upon Distillation, a strong Spirit; and likewise, if a considerable Quantity of it were boiled for a long time, it would probably yield a small Quantity of Sugar.

This Tree is delineated in *Plate III*.

The BARREN COCO NUT-TREE.

THIS differs very little, if any thing, in its Shape and Texture, from that already described: However, this never bears any Nuts, but an husky Substance only, resembling in Shape a common Coco Nut.

These are so rare, that I never saw any myself; but had them described by a Person of great Veracity.

The CABBAGE-TREE; Lat. PALMA MAXIMA.

THIS Tree is by some Authors called *The Palmeto Royal*. And well may it be called Royal from its great Height, majestic Appearance, and Beauty of its waving Foliage: Neither the tall Cedars of *Lebanon*, nor any of the Trees of the Forest, are equal to it in Height, Beauty, or Proportion; so that it claims among Vegetables that Superiority which *Virgil* gives to *Rome*, among the Cities of *Italy*:

*Verum hæc tantum alias inter caput extulit urbes,
Quantum lenta solent inter viburna cupressi.* Ecl. I.

Imperial *Rome* o'er other Cities tow'rs,
As lofty Cypress humble Shrubs o'erpow'rs.

Its Roots are innumerable, resembling so many round Thongs, of a regular determinate Bigness, seldom exceeding the Size of the little Finger,
E e but

but of a great Length, penetrating some Yards into the Earth, especially where the Soil is sandy, or otherwise porous: These Roots are of a dark-brown Colour.

The Trunk jets or bulges out a little near the Ground, by which means it hath the becoming Appearance of a substantial Basis to support its towering Height. It is generally as strait as an Arrow; and scarce can a Pillar of the nicest Order in Architecture be more regular, especially when it is of about Thirty Years Growth: And as there is a natural involuntary Pleasure arising from the Harmony of just geometrical Proportions, striking the Eye of the most unskilful and ignorant Beholder, it is not strange that these Trees are universally admired.

Writers of Wonders represent some of them to be Three hundred Feet in Height: However, the highest in this, where they are more numerous than in any of our neighbouring Islands, is but an Hundred and Thirty-four Feet.

The Trunk of this, near the Earth, is about Seven Feet in Circumference, the whole Body growing tapering to the Top.

The Substance of the Tree, for about Two or Three Inches of the Outside, but within the Bark, is of a blackish Colour, and extremely hard and solid: This surrounds the inner Substance, which is a whitish Pith, intermixt with some small Veins of a more ligneous Texture.

The Colour of the Bark much resembles that of an Ash-tree, and is very faintly clouded, at about the Distance of every Four or Five Inches, with the *Vestigia* of the fallen-off Branches: This Colour of the Bark continues till within about Twenty-five or Thirty Feet of the Extremity of the Tree: There it alters at once from an Ash-colour to a beautiful deep Sea-green, and continues to be of that Colour to the Top.

About Five Feet from the Beginning of the green Part upwards, the Trunk is surrounded with its numerous Branches in a circular Manner; all the lowermost spreading horizontally with great Regularity; and the Extremities of many of the higher Branches bend wavingly downwards, like so many Plumes of Feathers.

These Branches, when full-grown, are Twenty Feet long, more or less; and are thickly set on the Trunk alternately, rising gradually superior one to another: Their broad curved Sockets so surround the Trunk, that the Sight of it, whilst among these, is lost, which again appears among the very uppermost Branches, and is there enveloped in an upright green conic Spire, which beautifully terminates its great Height.

The above-mentioned Branches are somewhat round underneath, and slightly grooved on the upper Side: They are likewise decorated with a very great Number of green pennated Leaves: Some of these are near Three Feet long, and an Inch and an half broad, growing narrower towards their Points, as well as gradually decreasing in Length towards the Extremities of the Branches.

As

As there are many Thousand Leaves upon one Tree, every Branch bearing many Scores upon it, and every Leaf being set at a small and equal Distance from one another, the Beauty of such a regular lofty Group of waving Foliage, susceptible of Motion by the most gentle Gale of Wind, is not to be described.

The middle Rib, in each Leaf, is strong and prominent, supporting it on the under Side, the upper appearing smooth and shining. The pithy Part of the Leaf being scraped off, the inside Texture appears to be so many longitudinal thread-like Filaments.

These, being spun in the same manner as they do Hemp, or Flax, are used in making Cordage of every Kind, as well as Fishing-nets, which are esteemed stronger than those usually made from any other Material of the like Nature.

It is observed, that the lowermost Branch, for the Time being, drops monthly from the Tree, carrying with it an exfoliated circular *Lamen* of the green Part of the Tree, from the Setting on of the Branches to the Ash-colour Part, which is about Five Feet in Length, and, in Breadth, the Circumference of the Tree at that Part. This, and the Branch to which it is always fixed, fall together.

When the Loss of this lower Leaf happens, then the green conic Spire, which issues from among the Centre of the uppermost Branches, and rises superior to all, partially bursts, and thrusts from its Side a young Branch, which continues the uppermost, till another of the lowermost Branches drop off: Then the Spire, the common Parent of all the Branches, sends forth again another Branch, superior in Situation to the last: So that the annual Loss of the Branches below is providentially supplied in this manner by those above.

The green-coloured Part of the Tree, already mentioned, differs from the Ash-coloured Part no less in Substance than Colour: The former, instead of being extremely hard on the Outside, and pithy within, is composed of so many Coats, or separate *Lamine*, of a tough bark-like Substance of near a Quarter of an Inch thick, and so very closely wrapped together, that they jointly compose and constitute that green Part of the Tree.

As the lowermost, as well as each other higher Branch, when they successively grow to be old, is joined by the broad Socket of its Foot-stalk to this outward Coat, *Lamen*, or Folding, it is observable, that some time before the lowermost Branch is intirely withered, this green circular Coat, which to the Eye appeared some Days before to be a solid Part of the Tree, splits open lengthwise, from the Setting on of the Branches to the Ash-coloured Part beneath, being about Five Feet in Length, and the Circumference of the Tree in Breadth; and, peeling off, it falls with the falling Branch to which it is joined by many strong Cartilages, leaving the next succeeding Coat, to appear for a time as a constituent Part of the Tree, till a succeeding withered Branch carries this off likewise.

Having

Having felled one of these stately Trees, to examine its Make, Texture, &c. I observed, that the several Exfoliations of its green Part were equal in Number to the Branches.

The First, Second, Third, and sometimes the Fourth of these *Lamine* are green on the Outside, and perfectly white within: All the remaining inner Coats, or Foldings, are of a bright Lemon-colour without, and white within.

When these very tough husky Exfoliations are taken off, what is called the Cabbage, lies in many thin, snow-white, brittle Flakes; in Taste something like the Kernel of an Almond, but sweeter: It is so full of Oil, that a curious Observer may see several very small Cells abounding with it. These Flakes are called, from some Resemblance, when boiled, the Cabbage, which then eats somewhat sweet and agreeable: Yet I have always thought it the Height of Extravagancy and Luxury to fell so stately a Tree, which would be an Ornament to the most magnificent Palace in *Europe*, to gratify the Taste of any Epicure, especially as there is but a very small Part of it eatable.

What is called the Cabbage-flower, grows from that Part of the Tree where the Ash-coloured Trunk joins the green Part already described.

Its first Appearance is a green husky *Spatha*, growing to above Twenty Inches long, and about Four broad; the Inside being full of small white stringy Filaments, full of alternate protuberant Knobs, the smallest of these resembling a Fringe of coarse white Thread knotted: These are very numerous, and take their Rise from larger Footstalks; and these Footstalks likewise are all united to different Parts of the large Parent-stalk of all.

As this husky *Spatha* is opened, while thus young, the farinaceous yellow Seed, in Embryo, resembling fine Saw-dust, is very plentifully dispersed among these stringy Filaments, which answer the Use of *Apices* in other more regular Flowers: These Filaments, being cleared of this Dust, are pickled, and esteemed among the best Pickles, either here or in *Europe*.

But if this *Spatha* is not cut down and opened, whilst thus young; if it be suffered to continue on the Tree till it grows ripe and bursts; then the inclosed Part, which, whilst young and tender, is fit for pickling, will, by that time, have acquired an additional Hardness, become soon after ligneous, grow bushy, consisting of very many small Leaves, and in time produce a great Number of small oval thin-shelled Nuts, about the Bigness of unhusked Coffee-berries: These, being planted, produce young Cabbage-trees.

The greatest Number of these Trees uncultivated, are in Mrs. *Alleyne's* Wood, in that Part of the Island called *Scotland*; at Mr. *Holder's*, and at *Codrington's-College*; and by far the longest planted Walk is at Mr. *Ball's* Estate, commonly called *Farmer's Plantation* in *St. Thomas's* Parish: But the most regular in Growth, Proportion, and Beauty, either in this Island,



To His Royal Highness
FREDERICK,
Prince of Wales,
This Plate is most humbly Inscrib'd
&c.

Island, or perhaps in the World, is a small Walk at the Estate of Mrs. Warren, at the *Black Rock*; and another, tho' much inferior to it, at the Estate of *Joseph Terril, Esq;* in *St. Lucy's Parish*.

It is observed, that when these stately Trees are felled, either intentionally, or by the Violence of the Wind, there breeds in the Pith of the Trunk a kind of Worms, or Grubs, about the Size and Length of the first Joints of the Thumbs: These are eaten, and esteemed great Delicacies, by the *French* of the neighbouring Islands.

These Trees grow on the Tops of Hills, as well as in Valleys. The hard outside Part makes very durable Laths for Houses.

This beautiful Tree is delineated in *Plate IV.*

The small CABBAGE-TREE.

THIS, even at its greatest Growth, is far less than the Cabbage-tree already described, having likewise the green Part, near the Top, much less in proportion to its Bulk; than the former; and the *Spatha* likewise is somewhat redder.

As the Trunks of these Trees are so convenient to make long and durable Pipes, or Gutters, to convey Water, and other Liquids, from one Building to another, there are scarce any of them left growing in the whole Island.

The PALM OIL-TREE; Lat. PALMA OLEOSA.

THIS grows about Fifty Feet high.

Its Roots much resemble those of the Cabbage, or Coco Nut-tree. The Trunk is less tapering than the former, but generally straiter than the latter: It is likewise very deeply marked with the *Vestigia* of the fallen-off Branches, tho' not so scaly and rough as that of the Date-tree.

Its Branches somewhat resemble those of the Cabbage, or Coco Nut-tree; but they are far more ragged, less uniform, shorter, and less verdant, than either the Cabbage, or Coco Nut-leaves.

The Spine or middle Rib of each Leaf is likewise thickly studded with sharp-pointed Prickles, each Two Inches long.

The first Appearance of the Fruit is an husky *Spatha*. When this opens, it exposes to view a great many small Nuts: These are covered with an husky Tegument of a yellowish Colour, containing in its many Interstices, when ripe, a considerable Quantity of fine sweet Oil, which the Slaves, after the whole Fruit is first roasted in the Embers, greedily suck.

When this outward husky Covering is taken off, the Nut appears: This is of a somewhat blunt conic Shape, the Inside being filled with a white Kernel, of the Nature of the Coco Nut-kind, but in Taste not so agreeable.

The Nut, being bored and emptied of its Kernel, is much worn by several Nations of Negroes, by way of Ornament, about their Necks.

It is evident from the History of *Moses*, that this Tree was of great Value and Esteem among the *Israelites*. This appears from the several Portraitures of it in the Temple, even in the most sacred Place.

Several Cities in *Palæstine* were likewise called the Cities of the Palm-trees, especially *Jericho*: And *Deborah*, when she judged *Israel*, dwelt under the Palm-tree, between *Ramah* and *Bethel*.

These, and the Olive-trees, were of great Esteem; because they afforded such a Quantity of Oil, which was of so much Service, both in sacred and common Use.

As to the First, the Nature of my Subject will neither require, or even permit me to search into the Origin of that Custom. As to the latter, we have numberless Instances to prove, that the *Jews* mixed it with Flour, to make, at least, their unleavened Bread; especially from the Answer of the Widow-woman of *Sarepta* to the Prophet *Elijah*, when he desired her, in the time of Famine, to supply him with a Cake of Bread: And she said, *As the Lord thy God liveth, I have not a Cake, but an Handful of Meal in a Barrel, and a little Oil in a Cruse: And, behold, I am gathering two Sticks, that I may go in and dress it for me, and my Son, that we may eat it, and die,* 1 Kings xvii. 12.

Neither was this the only domestic Use of Oil among the antient *Jews*; for they made great Use of it to anoint their Bodies, which is plain from several Expressions of the Royal Psalmist; especially when he says, *That he shall be anointed with fresh Oil*: And in another Place, after enumerating the several temporal Blessings received from God, he mentions that of Oil to make his Face to shine.

The Inhabitants of *Africa*, where Palm Oil-trees abundantly grow, are living Comments upon these Two Parts of Scripture; for, to this Day, they mix Oil with their boiled Rice, and other Victuals; and anoint their Bodies with it, to supple and relax their stiffened Nerves, as well as to prevent a too plentiful Perspiration.

This is so universal a Custom, that all the Slaves, brought now from any Part of *Africa* to this, or any of our neighbouring Islands, are always, before they are brought to Market, anointed all over with Palm Oil, which, for that Purpose, is brought from *Guiney*: Being thus anointed, their Skins appear sleek and shining.

This Custom, however, was not peculiar, even in the earliest Ages, to the *Jews* alone; for the *Persians*, *Greeks*, and *Romans*, at certain Seasons, especially at their Feasts, anointed themselves with Oil, which was mixed with Spices.

Alexander, when he took the Tent of *Darius*, found there several Caskets of Ointments and Perfumes.

Many Instances from *Homer* make it evident, that it was then in Use: And the warlike *Spartans*, at the Streights of *Thermopylae*, are represented combing their anointed Hair, in Sight of the numerous Army of *Xerxes*.

And that it was a Custom among the *Romans*, will appear from the following Passages:

Tyrrhena

*Tyrrbena Regum progenies, tibi
Non ante verso lene merum cado
Cum flore, Mæcenæ, rosarum, &
Pressa tuis balanus capillis*

Jamdudum apud me est. - - - HOR. Carm. L. III. Od. 29.

- - - Dum licet, Assyriaque nardo

Potamus uncti. - - -

HOR. Carm. L. II. Od. 11.

These are some, out of the many Instances, such as *perfusus liquidis odoribus---nitidi capilli---* with many others too tedious to be mentioned.

Nor was this Custom intirely disused, nor the Ointment thought of little Value, even so late as the time of our Saviour: For, when a Woman in *Bethany* poured on his Head a Box full of precious Ointment, there were some who had Indignation among themselves, and said, *Why was this Waste of the Ointment made? for it might have been sold for more than Three hundred Pence.*

From what hath been said, with regard to the Custom of Anointing among the *Jews*, I would not be understood to mean, that Palm Oil alone was made use of; for the Oil of Olives is what is chiefly mentioned in Scripture: However, there are some Circumstances, which may induce us to believe, that both these Oils were promiscuously made use of.

This, I think, is very probable, from the several Places of Scripture, where the Growth of the Palm-trees is made a Part of the Blessings of the Land of *Canaan*; and the very natural, easy Method of coming at their Oil makes it more than probable.

These Trees are very scarce in this Island, except at *Drax's-Hall*, the Estate of *Henry Drax*, Esq; and even there they exceed not Twelve in Number.

Among these, there is one young Tree about Twenty-five Feet high, which is remarkably incorporated within a growing Fig-tree; nor was the following manner of its being thus enveloped, less surprizing.

About Nine Years ago, a ripe Fig, carried by Birds, or otherwise, was dropped among the upper Branches of the Palm-tree: As these are large and scooping near the Parent Trunk, and being set on in Scales, they retain a considerable Quantity of Dust, and rotten Leaves, as well as Moisture, their curve Shape, and close Juncture to the Trunk, being capable of retaining both. The Fig, deposited in such an earthy moist Place, soon germinated, and took Root; and, in a short time, its new-produced Roots, which extended themselves among the Sockets of the neighbouring Branches, meeting there with the like Nourishment, vigorously grew, and surrounded the Top of the Trunk in several cartilaginous Thongs: From thence, growing downwards, these innumerable fibrous pliable Roots swathed the Tree with many Bandages, which in time reached the Earth, and took fresh Roots: By this means their Growth was soon greatly

greatly advanced, by the Nourishment they received from thence. This new Supply gave likewise Birth to many Branches of the Fig-tree, rising from the Top, and growing among the natural Branches of the Palm-tree; the Roots of the other, in the mean time, continuing daily to surround the Trunk of the Palm, which, at present, being almost intirely cased or covered by the Fig-tree, is deprived of a great Part of its former Nourishment; and the few remaining Branches are far from being in a thriving Condition.

So, obscur'd
By creeping Ivy, or by sordid Moss,
Some lordly Palace, or stupendous Fane,
Magnificent in Ruin lies. — — — Glover's Leonid.

There is another Instance, similar to this, on *Horsam's-Hill*, in the Parish of *St. Peter's*; where, in like manner, a Fig, deposited among the Branches of a Cherry-tree, hath grown, and will, in a few Years, intirely case, if not destroy it.

The MACKAW-TREE.

THIS is of the Palm-kind, having a great many strong Roots, like those of the Cabbage-tree, or Coco Nut-tree.

The Trunk is very strait, round, and tapering: This is almost intirely covered with black Prickles, of about the Length, and very near as fine, as a large Stocking-needle.

The Leaves much resemble those of a Coco Nut, except that the middle Spine of this is always thickly covered with Prickles, and the Branches always ending in a Square, rather than a sharp Point, as if their Tops were sheared or clipped off.

The Inside of the Body of the Tree affords what we have, in the Coco Nut-tree, called Cabbage.

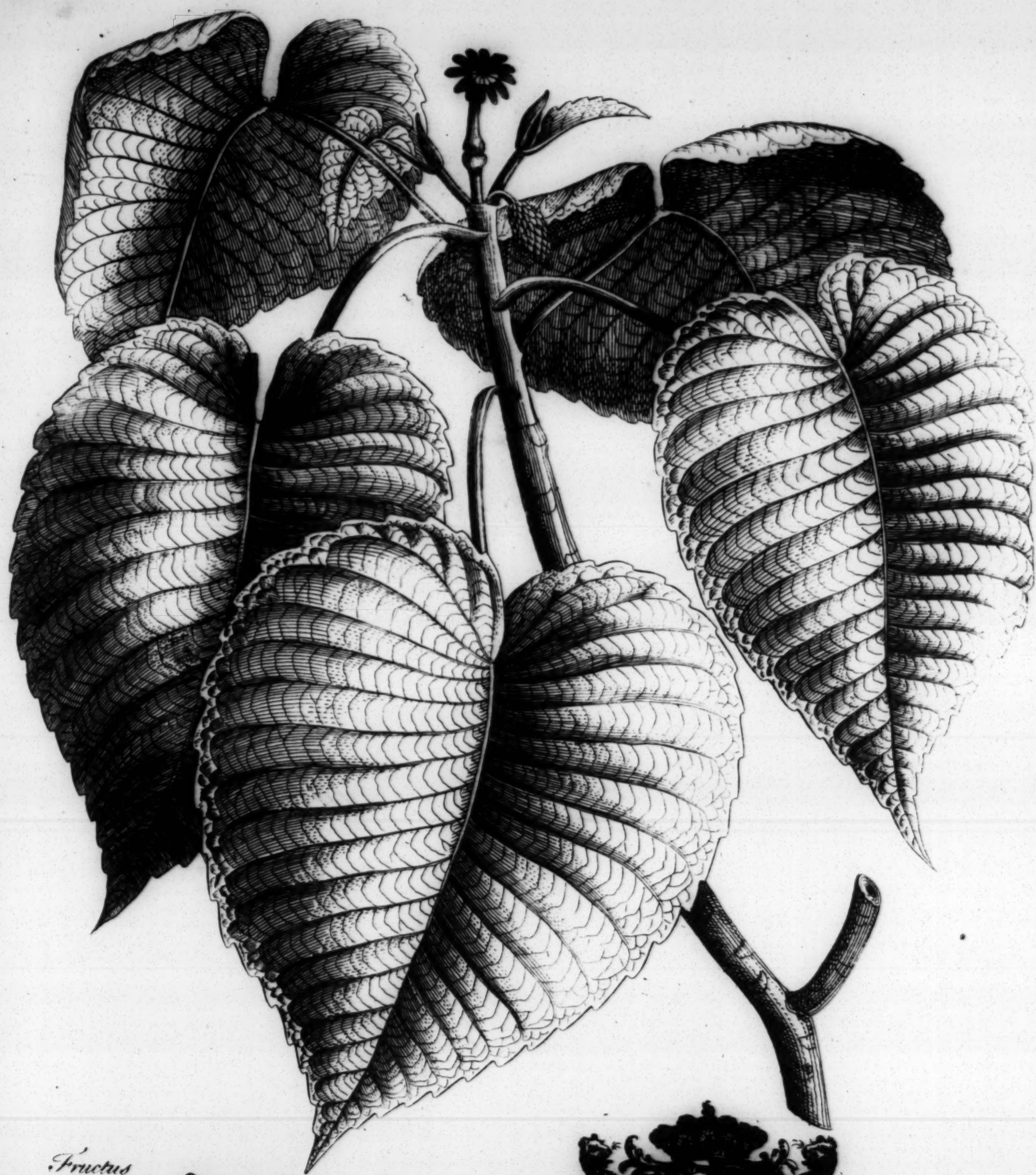
From among the Branches rises up an hard falcated *Spatha*, or Sheath, much resembling that of a *Turkish Scimiter*: This is near Three Feet long; and, when it opens, it discovers a round cartilaginous strong Twig, which runs the whole Length of the Pod, a great many thin-shelled Nuts, and somewhat bigger than a Sloe.

The SAND-BOX TREE; Lat. HURA.

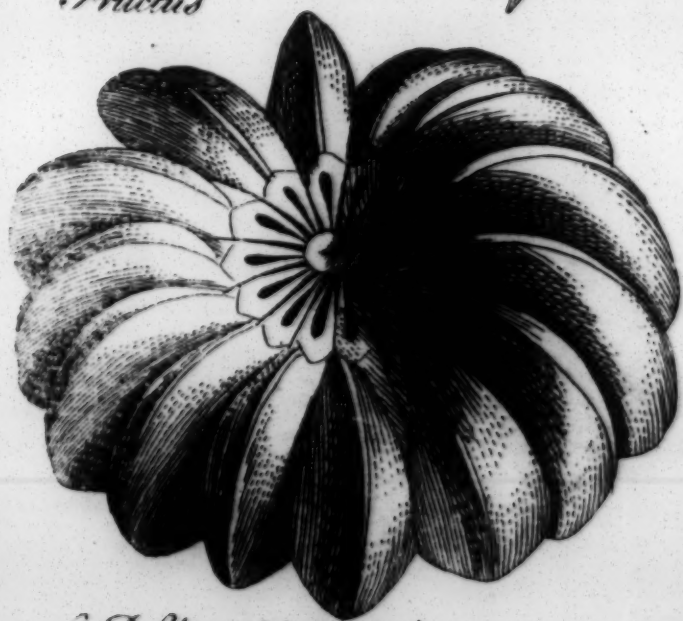
THIS grows to a large Tree, often to Forty Feet high; yielding a Shade of as many Feet Diameter.

The Trunk, which is of a light-coloured Bark, is thickly beset with short stubbed Prickles; and the Branches, clothed with shining-green sharp-pointed Leaves, are set on alternately: These are about Four Inches long, and Three broad. The Extremity of the Branches bears both Male and Female Flowers.

The



Fructus



G. D. Chrost delin. et Sculp.



*To his Grace the Duke of Dorset,
Lord President of his MAJESTY'S
most honourable Privy Council & Kn.^t
of y^e most Noble Order of y^e Garter,
This Plate is humbly Inscrib'd. &c.*



*To his Royal Highness the
Duke of Cumberland.
This Plate is humbly inscribed &c*

The former are of a blunt conic Shape, having their Surface thickly studded with reddish Knobs, each incricled with Two Rows of farinaceous whitish Dust: The Female Flowers are funnel-like Tubes, of a red Colour, whose thick *Labia* are much deflected back, and cut into Fifteen or Sixteen blunt Segments.

This is succeeded by a very flat round Fruit, deeply segmented into, generally, as many regular Divisions, or separate Cells, each inclosing a flat Kernel.

These, if eaten, operate by way of Purge; tho' it sometimes proves an Emetic.

This Tree is of very quick Growth, especially if planted in a shady Place, and near a Spring of Water.

The Trunk of one of these, planted in such a Situation, may be now seen at the Estate of *Richard Estwick*, Esq; and is not above Fifteen Years old, which girts round Nine Feet within Two Feet of the Earth; and its Top hath several Branches proportionably large.

There is another at the Estate of the Reverend Mr. *Reynold Foster*, the Diameter of whose Shade is above Sixty Feet.

And, tho' I have taken the Dimensions of these Trees myself; yet, as their Stature is so very extraordinary even here, I thought it proper to mention the Place of their Growth, that the Curious may, if they please, be further satisfied in this Particular: And I am well assured, that, if any one takes the same Trouble I have done, he will find their Dimensions considerably larger than I have represented them.

There is another Tree of this kind, near the Mansion-house in the Leeward Estate of *George Hannay*, Esq; in *St. Lucy's* Parish, which is little inferior to the above-mentioned, in its great Growth.

These Trees are called *Sand-boxes*, from the Use that is made of their Fruit to that Purpose.

This is delineated in *Plate V.*

The PHYSIC-NUT-TREE; *Lat.* RICINOIDES.

THIS is generally a knotty shrubby Tree, seldom growing above Twelve Feet high.

The Extremities of the Branches are covered with Leaves, somewhat round, having their Edges waved, as well as slightly indented.

The Flowers are of a green herbaceous Kind, and pentapetalous, set on in an Umbel-fashion round the Extremities of the Branches, but especially the main Stalks.

These are succeeded by as many Nuts, whose outward Tegument is green and husky: This, being peeled off, discovers the Nut, whose Shell is black, and easily cracked: This contains an Almond-like Kernel, divided into Two Parts: Between this Separation lie Two milk-white thin membranaceous Leaves, easily separable from each other: These have not only

a bare Resemblance of perfect Leaves, but have, in particular, every Part, the Stalk, the middle Rib, and transverse ones, as visible as any Leaf whatsoever.

The Kernel is not only eatable, but hath a delicious Almond-taste.

It is the common Opinion, that the purgative or emetic Quality lies in the Two membranaceous Leaves, that separate the Kernel into Two Partitions: But this is a Mistake; for I have, as well as others, tried it both ways; and its physical Effects were, with or without these, always the same.

The Leaves, and tender Buds, emit a milky Juice, which either by Insolation, or being rubbed on the Palm of the Hand, turns to the Consistence of a Salve, which is looked upon to be very good to heal any green Wound.

The Nut likewise, when ripe, pounded and boiled, will yield a considerable Quantity of Oil: A Spoonful of this swallowed, whilst fresh, is looked upon to be a good Purge, to abate Swellings in Dropical Disorders.

The FRENCH PHYSIC-NUT; Lat. RICINOIDES.

THIS Shrub often grows to be Ten Feet high.

The main Stalk divides into very few Branches, and is covered with a greyish white Bark.

The Leaves stand upon Six-inch Footstalks, surrounding the main Stalk, generally near the Top, in an irregular Order: These are very deeply digitated: Each Digit, by the several Subdivisions that grow from its Sides, in Shape, much resembles a Branch of the palmed Hart's-horn.

The Flowers grow in Bunches, Umbel-fashion, upon the Extremities of each large Stalk, very much resembling, at their first Appearance, a Bunch of red Coral: These afterwards open into small five-leaved purple Flowers, and are succeeded by Nuts, which resemble the common Physic-nuts in Shape and Qualities.

This is delineated in *Plate VI.*

The CEDAR.

THIS grows to be a large Tree, with a dark-coloured Bark.

Its Leaves are of a pale Green, about Two Inches long, one broad and sharp-pointed; their Edges being irregularly serrated.

The Flowers are succeeded by a Fruit as big as a Damascene: These, when ripe, are of a russet Colour, and split into Four Parts, discovering a thin flat Seed.

This differs from the *Carolina Cedar*, chiefly by the far closer Grain of the Wood: It wants also the fragrant Smell of the former.

The CALABASH-TREE.

THE Fruit called *Calabashes* are of Two Sorts; the one small and round, containing (when the pulpy Substance, and numerous white flattish Seeds, are scooped out) from One to Four Pints; the oval Sort often containing Fifteen Pints.

The Tree bearing the former is taller, and hath a lesser Leaf, and is also of a paler Colour, than the latter.

The Bark of both Trees is rough and shagged, if not fulcous in some old Trees; and what some Authors call *Capsular* Leaves, are only a Separation in the green husky Part of the *Calyx*; for this Tegument seems indeed to have been designed by Nature only to protect the Fruit, whilst tender, and in its infant State; and when that hath expanded itself on the Inside, and is become strong enough to bear the Air, it then bursts its Way thro' the former Covering.

This Tree, when full-grown, is about Eighteen Inches Diameter; and, in Height, from Fifteen to Twenty-five Feet; dividing generally into many spiral Branches, ending in a blunt Point.

The Flower is a large yellow Cup, freckled with Red, a Pistil rising from the Middle. The *Stamina* take their Rise from the Side of the Petals.

The Fruit is often so large as to contain (when cleared of its Seed, and white soft Pulp, with which it is filled) Two or Three Quarts, especially those which grow of a blunt oval Shape; but the round sort are much smaller. Each make very convenient Drinking-cups, and are serviceable to many other Uses.

The GALL-TREE.

AS there are very few, if any, of these Trees, left undestroyed in the Island, I am obliged to represent it from the Description of it given me by a Person of equal Knowledge in Plants, and Integrity in describing them.

This Tree seldom rises above Twelve Feet high, covered with Leaves of the same Make with, but somewhat longer than, those of the bastard *Lignum Vitæ*.

The Trunk, which is covered with a whitish Bark, soon divides into very many bushy Branches: The Extremities of these bear many small bluish Flowers in Groups, which are succeeded by numerous Berries, or Galls hanging on short Footstalks: These are about the Bigness of a Sloe, of an Ash-colour on the Outside, and black within.

This, with the Pods of Achasee, boiled together, makes good Ink.

The NEGRO OIL-BUSH, *Lat.* PALMA CHRISTI.

THIS shrubby Plant is distinguished into the red and white Sort.

The Oil, extracted from the Berries of the Red, is less rank than that of the other; and is sometimes made use of by several Nations of Negroes in their Soups.

The

The Trunk of this Shrub, which often grows to above Five Feet high, is strong, and closely jointed.

The first-mentioned hath a reddish, and the other a greenish Stalk; both generally clouded over with a glaucous Measiness.

The Leaves are many, surrounding the main Stalks, as well as the Branches (especially towards the Top): These are very large, often above Twenty Inches Diameter, being cut into several, seldom less than Eight, sharp-pointed Divisions: They are supported upon Footstalks of about Thirteen Inches long, centring in almost the Middle of the Leaf.

The Flowers, which surround the Summits of the main Stalks, for about Seven Inches in Length, first appear in the Form of small green *Capsule*, of a blunt conic Shape, which soon divide into Five sharp-pointed green Leaves; and by deflecting towards the Footstalk, discover innumerable small, pale, yellow, stameneous Flowers, tipped with *Apices*.

These Flowers, at first, are succeeded by greenish Berries, thick-set with harmless *Spinulae*: As they grow riper, these drop almost intirely off, and the soft brownish Husk of the Nut is discovered.

This is of a triangular Shape, divided into Three Parts, touching one another at Right Angles, and composing one Body, slightly rimmed with a brownish Fur, the Nut standing upon a pendulous bluish Footstalk.

When the outward Skin is taken off, it discovers a spotted Kernel.

These are so oily, that Ten Pints of them, being bruised, and then boiled, afford a Pint of Oil.

This Plant, or rather Shrub, thrives best in a sandy Soil, near the Sea; and as the Heat in such Places is intense, from the very strong Reflexion of the Sun from the Sand, I am of Opinion, that Nature intended it such a Situation, to serve (as it were) instead of an Alembic, to force up to the Extremities of the Branches, where the Berries are, such a great Quantity of Oil.

The BLACK NICKER-TREE.

THIS grows to be a considerable large Tree, covered with a Bark of a greyish White.

The smaller Branches are thickly cloathed with several Pairs of pinnated Leaves: These are Four Inches long, and an Inch and an half broad, smooth-edged and sharp-pointed.

The Flowers are succeeded by a round Snuff-coloured Fruit, somewhat bigger than a large Cherry, or rather of the Make of the small round white Plumb in *England*.

The outward Substance is tough, and very gummy: This, when ripe, separates from the Nut within, which is black and round.

When this dark-red shelly Covering is broken, it discovers a white bitterish Kernel.

If the outward Husk, which is no thicker than a Crown-piece, is put in Water, it will raise a Lather much sooner and stronger, than an equal Quantity of any Soap would do.

The JACK-IN-A-BOX; Lat. HERNANDIA.

THIS is of a very quick Growth; and, when at Maturity, is very seldom short of Forty Feet high.

Its main Branches are numerous and strong: These are subdivided into several lesser ones, which are alternately cloathed with large Heart-like Leaves, being Ten Inches long, and Six broad.

The Flowers issue in Bunches from the Extremities of the Branches: These stand upon Two-inch long Footstalks, and are composed of three whitish seemingly capsular Leaves, surrounding Three lesser white Petals: These also inclose several short *Stamina*, tipped with yellow *Apices*.

The Socket of the Flower discovers, near the Roots of the *Stamina*, several small yellowish farinaceous Grains.

As the Pistil grows in Strength, it becomes the Rudiment of the Fruit; which, when ripe, is of a blackish Colour, narrow at each End, and Three-quarters of an Inch long.

From each Extremity, it grows in the Middle to a roundish Body, of about Two Inches and an half in Circumference, deeply furrowed into several irregular Channels.

This blackish Coat incloses a Nut, whose Kernel is very near as large as a small Nutmeg, and much resembles it in the Colour of its Veins.

The Whole of this Fruit is surrounded with a thin husky brittle Case, or Covering, which never touches the Fruit, nor the Stalk, but where it surrounds it at the Bottom. This hollow *Capsula* is of a tawny yellow Colour, which is capable of containing, at least, a Gill of any Liquid, having an Aperture, at its Extremity, of about half an Inch Diameter: Thro' this the Fruit may be easily seen in the Cavity or Womb of this capsular Husk; which, when ripe, hath a very strong fragrant Smell.

The Tree is never known to be without both Fruit and Flowers.

The Wind, blowing into the Cavities of these Husks, makes a very sonorous whistling Noise.

The inclosed Kernels are very oily.

It grows chiefly in shady Places.

The End of the FOURTH BOOK.

THE
NATURAL HISTORY
OF THE
Island of *BARBADOS*.

BOOK V.

Of TREES, SHRUBS, *and* PLANTS,
of the POMIFEROUS Kind.



Y Pomiferous Fruits, I would be understood to mean all of the Apple-kind, such as have a thick fleshy Substance, inclosing many Seeds.

It is observable, that where the Climates begin to be too hot for the Growth of such Apples as are produced in some Northern, and all temperate Climates; there the gradual Chain is progressively carried on, and the delicious *Asiatic* Fruits begin to take place, such as the Pine-apples, Shaddocks, Forbidden

Fruits, and Oranges.

It is also worthy our Notice, that most of our Summer Fruits, especially in hot Countries, tho' delicate in their Taste, have a great Mixture of a latent Acid in them, which is necessary for the Preservation of Health
in

in hot Climates. And as most kinds of such Fruits are best adapted to qualify by their Coolness the Heat of the Body in Summer Seasons; so we find, that they grow, and are in Plenty, in Winter Countries, only at such times as they are most wanted: But as the Climates within the Tropics have, almost without Exception, a continual Summer, to the same Divine Hand hath provided for the Wants of those Places, by bountifully supplying them with a constant Series of various fresh Fruits of this kind.

The MANCHANEEL-TREE ; Lat. MANCANNILLA.

THIS, among many others, is very imperfectly described by all former Authors: And, tho' the Juice of this Tree is confessedly poisonous; yet the Force and Malignity of its Poison are extravagantly enhanced.

One (1) Historian, in particular, who loved to dwell upon the Marvellous, says, That the Heads of People, who happen to sleep a short time under its Shade, swell; and those who have so slept, grow blind; but if they sleep for a considerable time, they recover their Sight; likewise, that if the Leaves but touch the naked Skin, they raise Pustles, which cause deadly Pains, unless helped with Water and Salt, or fasting Spittle; and that even smelling the Wood is dangerous.

This Description is fabulous in every Article: For sleeping under its Shade hath no manner of bad Effect upon the Head or Eyes; nor is any ill Consequence to be feared from the Leaves touching the naked Body, unless these are bruised, and the white milky Juice they contain is suffered to pervade the Pores; which if it does, it raises Blisters, like those of the Confluent Sort in the Small-pox, causing acute Pains; but the simple Drops of Rain-water, falling from these Leaves upon the Skin, will not, as is falsely asserted, have any bad Effect; which I have often, upon repeated Trials, experienced.

There are some seeming Instances urged to confirm the contrary; especially of a Person washing in *Indian River*, who, upon an unexpected Storm of Rain, and high Wind, sheltered himself naked under the adjacent Shade of this Tree; where he had not been long, before he felt some Part of his Skin, about the Shoulders, smart, and soon afterwards an Eruption of painful corrosive Blisters.

I will lay no Stress upon the great Heat of the Sun, during the time of his Bathing, which often, near those sandy Bays, raises Blisters upon the Part exposed out of the Water; but am satisfied, and well convinced, that these Blisters were occasioned by Drops falling from this Tree; tho' at the same time, I must deny, that they were merely Drops of Rain-water: However, we cannot be at a Loss to account for the Blistering, and its painful Cause. If we recollect, that the Wind was very high in
this

(1) *Peter Martyr.*

this Instance, and the Rain very heavy; the former, by violently tossing and beating the tender Buds and Leaves against one another, bruised them; by which means, the milky poisonous Juice issued out in great Plenty, and washed off from the Leaves, with the Drops of Rain, upon the Person sheltering under the Shade.

From these Remarks upon the Mistakes of others, I proceed to give the best Description I am able of this Tree, both with regard to its outward Appearance, and its real Qualities.

The first thing that is to be observed, is, that it is of a very quick Growth, and seldom or never found growing to any Perfection, but in loose sandy Soil, near the Sea, or other Water.

Its Roots are strong and numerous.

The Trunk of a full-grown Tree is, generally speaking, from Two Feet and an half to Three Feet Diameter, branching, most commonly, from Three to Fifteen Feet high from the Ground.

The Heart, which is very small, in proportion to the Bulk of the Tree, is very hard and solid, of a pale Yellow, with a greenish Cast, interspersed with small blackish Veins, the Grain smooth, and the Wood durable; the Bark of a sleek whitish Grey, the Branches many in Number, and full of thick, smooth, shining Leaves.

There are here and there, among the Branches, long pendulous Katkins, which are produced at remote Distances from the Embryo's.

It bears a Fruit much of the same Make as the round sort of Crab-apples, which we have in *England*; and both, when ripe, have the same fragrant Smell.

The Pulp of these Manchaneel-apples exceeds not, in Breadth, one Seventh of an Inch, the Inside being an hard stony Kernel, deeply and irregularly fulcated; in which are included the Crab-like Seeds.

The Juice of the Apple is of the same Colour and Quality, as that of the Leaves.

But however strong the Poison really is at some Seasons, and at certain Growths of these Apples; yet I have known a Woman, big with Child, who longed for them, to have eaten of them, without any apparent bad Effect: However, I cannot say, that the Fragrancy of their Smell, or their tempting Looks, have induced others to try and follow her Example by so dangerous an Experiment.

If some of this crude milky Juice falls upon even an Horse, the Hair, from the Part affected, soon falls off; and the Skin rises up in Blisters, which will require a long time to heal.

One Instance of its Malignancy happened about Two Years ago in *Speights-Town*: A certain Slave, conceiving herself injuriously treated, poured into her Master's Chocolate about a Spoonful of this Juice: Immediately after he had swallowed it, he felt a violent Burning in his Throat

and Stomach ; and, suspecting he was poisoned, he strove, and with good Success, to vomit ; and, having taken after this seasonable Discharge, a regular Emetic, his Stomach was, in a great measure, suddenly cleansed of the Poison, tho' it cost him a long time to perfect the Cure.

I am likewise of Opinion, that the Vehicle, in which it was conveyed, contributed not a little to prevent its otherwise very ill, if not fatal Effects ; for, as most Oils are Antidotes against Poison, the Chocolate, being rich of the Nut, might be so very oily, that the poisonous Salts were sheathed or blunted in that Vehicle.

It hath been also observed, that Fish, as the *Barracuda*, and others, which eat these Apples, dropped casually into the Sea, are often found dead in the Wash of the Water ; and, if taken, whilst alive, and eaten, often prove poisonous ; and even the large white Crab, that burrows in the Sand, is not, if near these Trees, to be made use of for Food.

I shall conclude the Description of this Tree with a remarkable Observation, generally found to be true ; which is, that where-ever a Manchaneel-tree grows, there is found a White-wood, or a Fig-tree, near it ; the Juice of either of the latter being an infallible Antidote against the Poison of the former.

Salt Water is no less efficacious ; and as these always grow up by the Sea-side, this Remedy is near at hand.

Formerly no one dared to cut down these Trees, without first having made a large Fire round them, in order to burn the Bark, and dry up the Spry and Juices that fly from them in cutting : But now naked Negroes venture to cut them down green, only using the Caution of previously rubbing their whole Bodies with Lime-juice, which prevents the Juice from corroding or ulcerating their Skins.

Bruising and mashing the tender Leaves and Boughs, in Fish-ponds, hath often been likewise a roguish Practice of taking and destroying Fish ; for the Fish very soon after will grow stupid, float, with their Bellies upwards, on the Top of the Water, and often die.

The SHADDOCK-TREE ; Lat. AURANTIUM FRUCTU MAXIMO INDIAE ORIENTALIS.

THE Tree, bearing the large white Shaddock, hath many strong Roots. When full-grown, it is often above Sixteen Feet high, divided near the Top into many strong Branches, cloathed with numerous blunt-pointed Leaves, of about Four Inches long, and near Three in Breadth, of a deep Green above, and pale underneath ; resembling, in their Make, that of a sour Orange.

The Flowers are like the Orange, surrounding numerous *Stamina*, tipped with *Apices*.

These are succeeded by the Fruit, somewhat in the Shape of a Pear ; but far larger, and somewhat rounder.

The outside Skin is yellowish and smooth.

This

This Fruit was brought first from the *East-Indies*, by Captain *Shaddock*; from whom it derives its Name.

The Lesser SHADDOCK-TREE.

THIS is about the Bigness of a China Orange-tree; the Leaves differing in this only, that they are not above Two Inches and an half long, and about an Inch and an half broad.

The Flowers are monopetalous, deeply segmented into Five seeming white Petals, furrounding a great many *Stamina*, tipped with *Apices*.

The Fruit is distinguished into the red and white Sort, each larger than either an Orange, or a Forbidden Fruit; and is justly esteemed to have a fine delicious Taste.

The WILD SHADDOCK; commonly called, The Large LIME-TREE.

THIS grows somewhat larger than an Orange-tree; tho' the Leaves of this, as well as of all other Trees of this Class, differ very little in their Shape; and the Difference in their Flowers is hardly perceptible.

This is by far the largest Fruit in the Island, growing often to be Twenty Inches in Circumference.

The several rough Indentings and Knobs on its Outside, as well as the internal Make and Taste of its Juice, determine it to be rather of the Lemon, than either of the Shaddock or Lime-kind.

I have known near half a Pint of four Juice squeezed out of one of these Fruits.

This serves to supply the Want of Limes or Lemons in making Punch.

The SOUR ORANGE-TREE; Lat. AURANTIUM.

THIS grows in a rich Soil, to the Height of about Seventeen Feet. Its Roots are strong, deeply penetrating into the Earth.

Its Branches are numerous, especially towards the Extremity of the Tree; and are cloathed with sharp-pointed smooth Leaves, of a deep Green above, and somewhat pale underneath.

These are about Three Inches long, and near Two broad, supported by an Heart-like Footstalk, an Inch in Length.

The Bark of the Trunk is generally of a dirty-grey Colour, and of the smallest Branches, towards the Top, of a deep Green.

Its numerous white Flowers are monapetalous, divided into Five Sections, so deep, that they resemble pentapetalous Flowers.

These are succeeded by the Fruit, which is too well known to require a Description.

If

If these Fruits are not gathered when ripe, those which drop not off, will seemingly wither upon the Trees; yet these will revive, flourish, and be again, as it were, ripe, at the usual Season in the following Year.

I have seen an Instance of this kind in the Estate of the Honourable Colonel *John Maycock*, in *St. Lucy's* Parish.

The larger Branches of this Tree are, in common with all Orange, Lemon, Shaddock, Forbidden Fruit-trees, and Lime-trees, studded with many sharp strong Prickles.

The CHINA ORANGE-TREE.

THIS Tree, either in regard to its Roots or Size, Disposition or Make of its Leaves, differs very little, if any thing, from the four Orange-tree already described, unless that its Leaves have an Heart-like Appendix joined to them, serving as Footstalks: These are somewhat narrower, or sharper pointed, than in the former.

The Flowers are of the same kind as those of the four Orange already described, except that these are also less, and the Petals not so thick or fleshy.

The GUINEY ORANGE.

THIS Fruit, I think, ought rather to be called the *Sour Forbidden Fruit*; for in every Circumstance (except in the Sourness of its Juice) it resembles that Fruit; but it is much less than the eatable Forbidden Fruit.

The GOLDEN ORANGE-TREE.

THIS Tree differs not in either its Trunk, Leaves, or Flowers, from that already described.

It bears a large fine Orange, of a deep Yellow within; from whence it derives the Name of a *Golden Orange*.

This Fruit is neither of the *Seville* or *China* kind, tho' it partakes of both, having the Sweetness of the *China* mixt with the agreeable Bitterness and Flavour of the *Seville* Orange.

The PUMPLE-NOSE-TREE.

THIS Tree resembles the Shaddock in every material Circumstance.

The Fruit nearly represents, in its Make, that of the lesser Shaddock; and is in Bulk somewhat less than a Shaddock, and larger than the largest Orange.

These Fruits are eatable, their inward juicy *Vesiculæ* being much the same as those of Shaddocks: However, they are often too sour to be esteemed a very desirable or delicious Repast.



To the right Reverend
Father in God,
George C. Bishop of Exeter.
This Plate
is humbly inscribed.

The BURGAMOT-TREE.

THIS Tree, in its Bulk, Make of its Leaves, or Colour of its Bark, differs very little, if any thing, from the last described.

It bears a Fruit somewhat larger than an Orange, whose Inside affords very little Juice; and what it yields is not palatable, being too sour to be eatable.

What is most valuable in this is its Oil, which is extracted, by slicing the outward Skin, and squeezing both the Oil and Spry into a Glass: The Oil will immediately separate from the Juice, and swim upon the Surface.

This, being carefully drained off, and preserved, is what alone ought to be called the genuine *Burgamot Oil*.

The *Portuguese* have a Method of molding the Rind of this Fruit, to make Snuff-boxes: These Boxes retain, for a very long time, the grateful Fragrancy of the Oil and Spry.

FORBIDDEN-FRUIT-TREE.

THE Trunk, Leaves, and Flowers of this Tree, very much resemble those of the Orange-tree.

The Fruit, when ripe, is something longer and larger than the largest Orange; and exceeds, in the Delicacy of its Taste, the Fruit of every Tree in this or any of our neighbouring Islands.

It hath somewhat the Taste of a Shaddock; but far exceeds that, as well as the best Orange, in its delicious Taste and Flavour.

This is delineated in *Plate VII*.

The CITRON-TREE.

THE Encomiums that are often, by *European* Writers, bestowed upon this Tree, and generally ushered in with a pompous Description of the Beauty of its Flowers, Fruit, and delightful Shade, are something like the poetical Representation of a Shepherd's Life, embellished with purling Streams, and shady Groves; but not a Word of their coarse Fare, nor of their enduring the uncertain Vicissitudes of Heat and Cold!

What bears the Name of a Citron-tree is, in Reality, so far from affording a friendly Shade, that it is but a groveling prickly uncouth shrubby Tree, having neither Beauty in Appearance, nor Deliciousness in the Fruit, unless what the Rind affords by Distillation.

The Leaves, which are set alternately upon the Branches, are about Four Inches long, and sharp-pointed.

The Flower resembles that of an Orange; and the succeeding Fruit is large and yellow, when ripe; the Outside being irregularly indented, mixt with numerous Protuberances: The Inside resembles that of a Lemon.

There lies between the outward Coat, and the juicy Part, a thick spongy whitish pithy Substance.

The ST. HELENA LEMON-TREE.

THIS is rather a prickly branching Shrub, than a Standard.

It branches very near the Ground; and, as the Branches are many in Number, they interfere with each other; and their Tops, especially when loaded with Fruit, bend wavingly downwards, almost to the Ground.

The Leaves, which are set alternately, are longer and paler than those of the Orange-trees, and want likewise their Heart-like Footstalks.

Its Blossoms resemble those of the just-mentioned Tree; and the Fruit, when ripe, is of a pale-yellow Colour, and oblong in Shape, ending with a Nipple-like Protuberance.

These are but very moderately four, and very grateful to the Stomach: Therefore it is much made use of in all Sawces, which require any Acid.

It grows best in shady Places.

Gulielmus Piso, in his *Natural History of the West-Indies*, has been profuse in his Encomiums upon the Virtue of Lemons; which appears from the following Words:

Peritissimi nonnulli Indiarum orientalium & occidentalium medicastri, præter vulgares illas toto orbi celebratissimas limonum & citreorum vires, quas quoque perpetuo commendabiles habent, plus præsidii a duabus his limonum partibus (semine, scilicet, & medulla) ponunt contra malignos morbos, & pestilentes febres, atque ipsa denique venena, quam in lapide bezoardico, & fastidiosa theriacæ compositione. Piso, p. 314.

Ansam mihi suppeditari autumabam aliquid ad artis nostræ incrementum ediscendi; idque aliquoties tentans, non infeliciter processit: in febribus, scilicet, intermittentibus, circa initium paroxysmi, haustu calido succi limonum, cum sacchari & aquæ fontanæ tantillo, semel atque iterum exhibito, exacerbationes vel in totum cessasse, vel saltem indies præter expectationem, simul cum siti, deferbuisse, & intra paucos dies plane fluxisse, deprehendi, subsequente utique manifesto affectu urinæ, scilicet, & imprimis sudorum larga promotione. Ibid. p. 315. Vide p. 313.

The SPANISH LEMON-TREE; Lat. LIMON.

THIS groveling shrubby Tree seldom grows to what we may properly call a Standard; for it generally divides near the Earth into many weak Branches, which rise about Ten Feet high; and then, especially if loaden with Fruit, they bend downward, often so low as to touch the Ground.

The Leaves are about Four Inches long, and about Two in Breadth, of a faint yellowish-green Colour, and set on the Branches alternately.

The Flowers are the same with the foregoing; and are succeeded by an oblong yellow Fruit.

The

The LIME-TREE.

THIS Tree, generally speaking, soon divides into many Branches, and these into still lesser ones, thickly cloathed with Prickles, as well as deep-green smooth sharp-pointed Leaves, which are near Two Inches long, and above an Inch broad.

It bears a very great Number of small white monopetalous Flowers, divided into Five seeming Petals.

These are succeeded by the Limes, which are a round Fruit, about as big as a Crab-apple.

These are yellow, when ripe; and afford a great Quantity, considering their Bulk, of a thin and very sour Juice.

This, or the Juice, or Lemon, is the chief Ingredient of the acid kind in both Sherbet and Punch.

The Inside affords a great many small white Seeds of the Apple-kind.

The Trees are propagated from these Seeds, planted about an Inch deep in the Earth.

The Limes, when young, are preserved, and make a Part of our Barbados Sweet-meats.

The SUGAR-APPLE-TREE; *Lat.* GUANABANUS.

THIS is of a middle-sized Growth, cloathed with weak pale thin Leaves, of about Four Inches long, one in Breadth, and smooth-edged.

These are set on the Branches alternately.

The Flowers are composed of Three thick narrow herbaceous Leaves, white within, and green on the Outside.

From the Centre of these grows the Fruit; which at first appears in a green Button; but as it grows, enlarges, and becomes of a blunt conic Form; the Outside divided into several bluish irregular squamous Protuberances.

These afford a soft, stringy, sweet, pulpy Substance, inclosing a blackish oblong Stone or Kernel.

The Fruit is looked upon to be wholesome.

The MONKEY APPLE-TREE.

THIS grows to about Twenty Feet high.

Its Branches are thickly covered with Leaves, much resembling those of a Sourfop-tree.

It bears a large round Apple, the Inside resembling the Sourfop-fruit.

The Tree, Leaves, and Fruit, emit a very offensive Smell in rainy Weather.

The Fruit hath its Name from its being eaten by Monkeys.

The

The AVIGATO PEAR-TREE ; Lat. PERSEA.

THIS grows to be a large wide-extended Tree, whose Branches are cloathed with many large sharp-pointed Leaves.

The Flowers, which are hexapetalous, appear at the Extremities of the Branches, each succeeded by a large Fruit of a Pear-shape.

These are of Three Kinds ; the Red, the Purple, and the Green sort: The last is esteemed the best.

The pulpy Part of this Fruit is soft, when ripe.

It is looked upon to be very nourishing.

The most common Method of eating it is, to mix this Pulp with a little Sugar and Lime-juice.

The Stone or Kernel is very large, and of a pale-russet Colour.

The POMGRANATE-TREE ; Lat. PUNICA.

THIS is a shrubby Tree, seldom arising above Sixteen Feet high.

Its Branches are very many and slender.

Its Flower is of the brightest Red, composed of a blunt red conic husky *Calyx*, divided, at the Margin, into Six sharp-pointed Sections, inclosing as many Rose-like scarlet Leaves.

These likewise surround a great many red short *Stamina*, tipped with yellow *Apices*.

The succeeding Fruit is round, and as big as a large Apple, decorated at the Top with a *Corona*, as a Pear.

The outside Rind is strong and husky, and generally, when ripe, of a maiden-blush Colour.

The Inside is divided into several partitional Cells, inclosing a great Number of granulated small *Acini*, tasting somewhat like, but more delicious than, white Currans in *England*, when not over-ripe.

The outward husky Peel of this Fruit, when dried and pulverized, is good for Fluxes, and much used for that Purpose.

The Fruit of some of these Trees is so sharp, that they are not eatable.

They are generally distinguished into the white and red Sort.

There are of each sort some particular Trees bearing sweet, others bearing four Fruits.

These Trees flourish in every Part of the Land of *Palestine* ; and were in so great Esteem among the *Jews*, that the Chapters of the Pillars, in *Solomon's Temple*, were adorned with the Representation of these, as well as of Palm-trees.

The small POMGRANATE-TREE ; Lat. PUNICA AMERICANA.

THIS is a small woody perennial Shrub, which seldom rises above Four Feet high ; and is chiefly planted for Border-hedges in Gardens. It

It is thickly covered with small longish blunt-pointed green Leaves. The top Branches sustain a great many red blunt conic husky *Calyxes*. Each of these is divided, at its Margin, into Six regular sharp-pointed Sections.

This *Calyx* surrounds Six Rose-like scarlet Petals.

These likewise inclose a great many red *Stamina*, tipped with yellow *Apices*.

When the Flower drops, the *Calyx* becomes the Rudiment of the Fruit, which grows somewhat larger than a large round Crab-apple; the Top decorated with a *Corona*, like a Pear.

The Inside is divided, by thin membranaceous *Lamine*, into several larger partitional Cells.

These are filled with granulated *Acini*, closely joined together; and are generally too sour to be eaten.

The SOURSOP-TREE; Lat. GUANABANUS fructu e viridi lutescente molliter aculeato. Plum.

THIS is a middle-sized Tree, having many Branches, and these clothed with numerous sharp-pointed Leaves.

The Fruit is of an Heart-like Shape, but somewhat longer, and generally bending towards the Point; the Outside of a glaucous Green, studded here and there with soft-pointed Prickles.

The Inside is a soft pulpy Substance, which is eaten, and looked upon to be a good Cooler in Fevers.

The ANCHOVEE APPLE-TREE.

THIS grows to the Bigness of a large Apple-tree.

Its Branches are many, clothed with smooth green sharp-pointed Leaves, which are Six Inches long, and almost Three in Breadth.

These are set on the Branches alternately, whose Summits sustain a short conic husky yellowish Pod, opening into Three Partitions; the Inside discovering Seven other yellowish imperfect husky thick Leaves.

In the Centre of these is the Fruit in Miniature, which is then about the Bigness of a Button, incrusted all over with a pale-yellow granulated Substance.

When the Fruit grows sufficiently strong, to bear the several Vicissitudes of the external Air, the Leaves drop off, and the Fruit continues to grow to the Bigness of a very large Russet-apple; nor doth its outward Coat ill resemble that Apple in Colour.

Its Shape is rather of a very blunt Cone, than round.

The Inside is of a fine Yellow; and the Pulp, which surrounds a great many *Lamine* of oblong flattish Seeds, is of an agreeable sweet Taste.

The GUAVA-TREE ; Lat. GUAJAVA.

THE Fruit called the *Guava* is distinguished into Two sorts ; the White and the Red ; and these, with regard to their Shape, into the round, and the Pear-fashioned, or perfumed Guavas.

The latter have a thicker Rind, and are looked upon to be of a more delicate Taste, than any other : However, I think the Difference is very small.

This Tree, if carefully cultivated, and in a good Soil, will grow to about Eighteen Feet in Height.

Its Bark is very smooth, and of a reddish Grey.

The Leaves are about Three Inches long, sharp-pointed, and high-ribbed.

The Flowers are white, and pentapetalous, guarded with Four capsular Leaves, green without, and white within.

The Petals surround a great many short *Stamina*, tipped with pale-yellow *Apices*.

These inclose the *Stylus*, which is the Rudiment of the Fruit ; which, excepting the perfumed Guava, is round, and about the Bigness of a large Tennis-ball ; the Rind, or Skin, generally of a Ruffet, stained with Red ; the Top adorned with a *Corona*, as a Pear.

The Skin, or Rind, is lined with an Apple-like Substance, as thick as a Crown-piece.

The Inside of this is full of an agreeable Pulp, mixed with innumerable small white *Acini* or Seeds.

The Rind-part of the Guava, when stewed, is eaten with Milk, and justly looked upon to be preferable to any other stew'd Fruit.

From the same Part is made Marmalade ; and from the whole Fruit, the finest Jelly perhaps in the World.

These Trees grow in most Parts of the Island.

The Fruit is ripe about *October*.

The SAPPADILLA-TREE ; Lat. CAINITO.

THE Roots of this Tree are considerably large.

The Bark is very much furrowed, and of a greyish-white Colour.

The Branches are very many, and spreading.

These are thickly covered with very smooth sharp-pointed shining-green Leaves, of about Three Inches long, and an Inch and an half broad.

It bears many small monopetalous Flowers, of a pale White, deeply lacinated, at their Tops, into many Divisions, resembling distinct Petals surrounding a green Pistil.

From the Sides of these seeming Petals rise many short *Stamina*, tipped with yellow *Apices*.

These Petals are guarded with Two Sets of capsular Leaves ; one of a brown, and the other of a pale White.

The



To his Excellency
the R.^t Hon.^{ble} Earl of Albemarle.
this Plate is humbly inscribed.
&c.

The Pistil becomes the Rudiment of the Fruit ; which, when full-ripe, hath a russet rough Coat, with a *Corona* upon the Top of it.

This, in Shape, Bigness, and Taste, doth not ill resemble a Burgamot Pear, except that it is sweeter and softer ; the Pulp of it inclosing several longish black Seeds.

The Leaves, as well as their Footstalk, and tender Buds, emit, when broken, a white clammy Milk.

The MAMMEE-TREE.

THIS grows to be a large shady Tree.

The Bark of the Trunk, as well as of the main Branches, is somewhat fulcated.

The Leaves, which are very thickly set on in an alternate Order, are round-pointed, and smooth, of a very deep Green, about Five Inches long, and near Three broad.

The Flowers are white, and pentapetalous, somewhat larger than Orange-flowers.

These are succeeded by a round russet Fruit, full as big as the largest Russet-apple.

The outward Coat is rather an husky, than a skinny Tegument.

This peels off as the Rind of a Tree in the Spring does, and discovers the eatable Part of the Fruit, which is of a pretty solid Substance, of a fine yellow Colour.

This is about half an Inch thick, surrounding Two or Three large Stones, so joined together, that the Whole makes a circular Figure.

The eatable Part is well tasted, and hath an agreeable Flavour.

The FRENCH WILLOW.

THIS is a shrubby Tree, seldom growing above Sixteen Feet high.

Its Branches are very numerous, and very thickly cloathed with Leaves of Six Inches long, and a Quarter of an Inch broad.

These, as well as the tender Stalks, when broken, emit a considerable Quantity of thick milky Juice.

The Extremities of these Branches support several yellow Flowers, composed of Five Leaves.

These are so closely joined together, that the Flower exactly resembles the Bell-fashion kind ; and are succeeded by an Apple of about the Bigness of a large Crab-apple.

The Pulp of this surrounds a flattish Kernel, which is white and soft ; and the Top of it marked with Two unindented Seams crossing one another at Right Angles.

This is delineated in *Plate VIII.*

The

The GARLICK PEAR-TREE.

THIS is a middle-sized Tree.

The Colour of the Bark, especially on the upper Branches, is of a Dark-grey, interspersed with whitish Specks.

The Leaves are of a fine clear Green, of about Four Inches long, and sharp-pointed.

These are set upon long Footstalks, in a tripartite Order.

The Flower is composed of Five small Spoonlike Petals, growing very slender, and small at the Bottom.

From the Inside of these rise about Fifteen purple *Stamina*, tipped with yellowish-green *Apices*.

From the Centre rises the *Stylus*, which bears upon its Top the Rudiment of the Fruit.

As this grows in Bigness, the *Stylus* grows in proportion; and at last becomes ligneous, able to support the Fruit, which in time grows to be as big as a large *Guava*; the Inside being full of an agreeable Pulp, interspersed with small granulated Seeds.

The tender Buds, from the young Branches, being bruised, and applied as a Cataplasm to any Part of the Body, will in time raise a regular Blister.

It would perhaps be beneficial, if some of the Learned in Physic would inquire, whether it would intirely answer the End of the *Cantbarides*; especially as it may not affect the urinary Vessels, and consequently not cause a Strangury.

Whilst this Tree is in Flower, it is much frequented by Humming-Birds, which come to suck the Honey-dew from the Blossoms; and Butterflies lay their Eggs in great Abundance upon the Leaves of this Tree.

Lhammus Jujuba L. The DUNK-TREE, or MANGUSTINE.

THIS is a middle-sized Tree.

The Branches are numerous; and, after growing to about Fifteen Feet high, they bend wavingly downward, with a considerable Sweep, till they nearly touch the Ground, leaving a circular fine *Area* between that, and the Body of the Tree.

The Bark is of a reddish Grey.

The Flowers, which are many and small, are white; each consisting of one stellated Leaf, whose *Discus* is surrounded with Four short white *Stamina*.

The succeeding Fruit is, in Shape and Colour, like a small Crab-apple, except that both Ends are somewhat more depressed.

Its Taste is very agreeable; and therefore esteemed by most People.

The Tree, when in Blossom, emits a very fetid offensive Smell.

The CASHW-TREE ; Lat. ANACARDIUM.

THIS is a low wide-spreading Tree.

Its Branches are generally crooked and straggling, cloathed with oval Leaves, whose middle Ribs are strong and prominent ; the transverse ones running almost directly cross the Leaf.

It bears small white five-leaved Flowers.

These are succeeded by the Fruit, which is distinguished into Three Sorts ; the Large White, the Large Red, and the Red-and-white.

These are not unlike, in Shape, to an Apple, called in *England*, the *Pearmain*.

The Inside is very stringy, full of rough, astringent, yet pleasant Juice.

Upon the Top of each stands a Nut, inclosing a Kernel. This Fruit is the *Anacardium* of the Antients.

Its Shape is like an Hare's Kidney, affording a great Quantity of caustic Oil ; and the inside white Kernel is roasted and eaten.

The COCHENEEL SHRUB.

THIS very much resembles the Pimploe Shrub already described ; and differs chiefly from it by its greater Height, which is often Twelve Feet.

Its Leaves likewise are very prickly.

It bears upon conic Footstalks, such as the prickly Pear Footstalks, several roseaceous Flowers, of a deep Scarlet, surrounding a Tuft of purple *Stamina*, tipped with whitish *Apices*.

In the Middle stands the Pistil, divided at the Top into Six Starlike Divisions.

The Flowers are succeeded by a Fig-like Fruit ; which, when ripe, is full of a deep-purple Pulp, as well as Juice.

It is to be wished, that the fine Colour it stains Linen with, could be fixed.

The AMERICAN TORCH ; Lat. CEREUS MAXIMUS.

THE Roots of this are fibrous and many.

The reticulated Body of the main Stem, as well as the outward *Lamina*, covering the Whole, exactly resembles the Texture and Colour of Pimploes, already described. The Body of this, near the Ground, rises into several upright lesser Stalks, from whose Top rise others, till by such a Multiplication the Whole grows often to Eighteen or Nineteen Feet high.

Each of these are nearly of a Bigness, being about Eight Inches in Circumference ; and, from Joint to Joint, about Three Feet in Length.

These are regularly channelled from Top to Bottom into about Ten deep-gouged Furrows.

The Edges or Eminences of each Furrow are thickly beset, at the Distance of half an Inch, with Star-like Tufts of whitish slender Prickles, from an Inch to an Inch and an half long.

These, while young, are nursed and guarded at the Bottom with a Cotton-like woolly Substance, which flies off when these are sufficiently strong to endure the Vicissitudes of the Weather.

From near the Top of some of the largest Stalks rises a longish scaly green Pod-like Substance, here-and-there marked with white Spots; from which grow many yellowish sharp slender Prickles.

The Flower, which is at the End of this Pod-like Substance, is composed of a great many round-pointed Petals, of a yellowish-red Colour.

The Pistil and *Stamina* are tipped with yellow *Apices*.

When these Flowers drop, the above-mentioned green *Calyx* becomes the Rudiment of the Fruit; which, when ripe, is full of small *Acini*, affording a purplish Juice.

The TURK'S HEAD; Lat. MELOCACTUS AMERICANUS.

THIS, I suppose, derives its Name from its distant Resemblance to a high-raised Turbant.

Its outward Texture is a very green skinny Tegument; its Shape of a very blunt Cone, whose Sides are deeply striated; each intermediate Rising thickly studded with long sharp-pointed Prickles.

Near the Summit appear very many red rosaceous small Flowers.

These are succeeded by small oval red Berries, full of an agreeable Pulp, interspersed with small *Acini*.

The Root of these Flowers and Fruit is guarded with a soft Cotton-like Substance.

The MUSKMELON VINE; Lat. MELO.

THIS Fruit is distinguished, by the Colour of its Pulp, into the white and red Sort; each deriving its Name from the Fragrancy of its Smell.

As this Fruit is so well known, both here, and in *England*, a particular Description of it would be superfluous.

I shall therefore only observe, that the Vine is rough, almost to a Prickliness, bearing small yellow monopetalous Flowers.

Each of these divides into Five Sections, so deep, that they resemble pentapetalous Flowers.

The WATER-MELONS.

THESE, as well as the former, are distinguished, by the Colour of their Pulp, into the White and Red; each deriving its Name of a Water-Melon from the great Quantity of that Liquid they contain.

By

By their cooling and diuretic Quality, they are so serviceable in hot Climates, that the poorer Sort in *Persia* and *Turky*, especially in the *Levant*, for the Summer Months, live almost solely upon the Musk and Water-Melon, Cucumbers, and Milk.

The Vine producing the Water-Melon is long and trailing.

PUMKINS; *Lat. PEPPO.*

THE different Species of these are generally distinguished by the Names of the White, the Blue, the Marbled, and the Garden Pumkin.

The latter differs from all the rest, by having no Seed; but is propagated by Slips.

These are all easily produced, and of a very quick Growth.

They make a great Part of the Food of the poorer Sort, in the Summer-time, as well in *Asia* and *Africa*, as in *America*.

The Vines, bearing these different Sorts, are each rough and hairy, both Stalks and Leaves; and the Flowers are yellow, monopetalous, and very large, divided at the Top into Five deep Sections.

The Pistil is surrounded with yellow farinaceous Dust, which, by Three open Slits at the Bottom, drops into the Ovary.

The succeeding Fruit is generally, whilst young, of a Mixture between a deep Blue, and a pale White.

They are boiled and eaten with Flesh-meat.

I have seen a Species of these Fruit at *Paris*, which exceeds any in the *West-Indies* in Bigness.

It is much used by the poorer Sort in Soups.

SQUASSHES; *Lat. MELOPEPO.*

THE Squash-vine is long and trailing, the main Stalk multangular and hairy.

It supports itself by its numerous Claspers and Tendrils.

The Leaves are large, and very rough.

Their Edges are irregularly serrated, as well as the Leaves in general, somewhat scalloped.

From the Blossom of the Leaves rise several Pedicles, supporting the Fruit in Miniature; whose Top is decorated with a large reddish-yellow Blossom, which continues on the Fruit, till it is eatable; which it generally is, when as big as a Walnut.

When boiled, they are by most People esteemed to be very delicate eating.

These are of Two sorts; the Long and the Round.

The

The large GOURD VINE ; Lat. CUCURBITA.

THIS Vine is long and trailing, of a multangular Shape, and very hairy.

The Leaves, which are large, and almost circular, are covered with soft *Villi*, or Hairs.

These Leaves smell strongly of Musk.

The Flowers, which stand upon Footstalks Six Inches in Length, are monopetalous, divided into Five deep Sections, and of a dirty-white Colour.

These are inclosed in a small hairy *Calyx*, divided also into Five Sections; and are so tender, that they are closed up as soon as the Sun shines upon them.

When these Flowers drop, they are succeeded by the Fruit, which grows something Pear-like in Shape.

The outside Tegument, as it ripens, grows hard, something resembling a Nut-shell, but softer. The Inside is of a soft white Substance, intermixed with flattish Seeds, like those of Melons.

Some of the largest Species of these Gourds are capable, when cleared of their Pith, to contain Twenty-two Gallons: However, such are very uncommon.

The largest of these that I saw, was at Mr. Richard Jackman's, in St. Peter's Parish.

The small GOURD ; Lat. COLOCYNTHIS.

THIS Vine is round, soft, and hairy, provided with numerous Claspers. With these they cling to the neighbouring Bushes.

The Leaves are large, and of almost a circular round Shape, standing upon Footstalks, Four Inches in Length.

These are set on alternately; the Flowers, which are white, and composed of Five white Petals, surrounding several *Stamina*.

These are succeeded by the Gourd, which is yellow, when ripe.

The shelly or husky Outside incloses a white bitter Pulp, interspersed with whitish flat Seeds.

An Hole being made in one of these ripe Gourds, if a Glass of Rum be poured in, and suffered to remain there for Twenty-four Hours, and then drunk, it proves a successful Purge; but is so bitter, and leaves such a *Nausea* behind, that it is seldom used.

The SWEET GOURD.

THIS Gourd differs from the last described, by its very great Length and Narrowness; being often above Two Feet long, and about Six Inches in Circumference.

It differs likewise from all others, by its Pulp being rather sweet than bitter.

When

When these are ripe, the inside soft waterish Pulp and Seed are scooped out: Then there remains, next to the husky or shelly outward Part, a Pulp of a more solid Substance, than what is scooped out.

This, being likewise taken out in Slices, and somewhat dried of its natural Juice, is put into several Syrups; and at last, candied or frosted over, becomes an agreeable Sweetmeat.

BATCHELOR'S PEARS; *Lat.* SOLANUM fructu pyriformi
inverso.

THESE are of Two sorts; the one almost spherical; the other hath the Resemblance of a Nipple upon the Top.

The Plant that bears these, grows to about Three Feet in Height, supported by very few Roots.

It hath many Side-Branches, which are very prickly.

These are cloathed with deep segmented rough Leaves, which are about Six Inches long, and Three broad.

Their middle Ribs, as well as the transverse, are guarded with a great many sharp-pointed Prickles.

The Flower, which is composed of one single Leaf of a whitish Blue, expands itself horizontally.

This is supported by Five small sharp-pointed capsular Leaves.

From the Centre rise Five yellow deep-chanelled *Stamina*.

These are succeeded by the Fruit above-mentioned; which, when ripe, is of a golden Colour, and about the Bigness of a Tennis-ball; the Inside being full of small Seed.

This Plant grows chiefly in very rich Ground, especially upon Dunghills.

BREAD AND CHEESE; or, SUCKING-BOTTLE.

THIS is a ligneous Wyth, with dark Iron-coloured Leaves, each like those of an Orange, having a longish Heart-like Stalk.

These are about Three Inches long, sharp-pointed, and here-and-there snipped on the Edges.

The Stalk of the Vine, as well as the middle Ribs of the Leaves, is of a purple Colour.

The Flowers are succeeded by yellow conic capsular Pods, somewhat in Shape like a Bottle, each dividing into Three Partitions, having one Seed, which, at one End, is covered with a whitish rough Pith, which is sometimes eaten.

The Root of this Vine, mixed and boiled with Lime-juice, and the Rust of Iron, by way of Plaister, cures the Body-Yaws.

CUSTARD-APPLE ; *Lat.* GUANABANUS fructu aureo, & molliter aculeato. *Plum.*

THIS Tree is about the Bigness of the last-described. It bears a Fruit nearly round, and of a yellow Colour, when ripe.

The Inside is full of a soft white pulpy Substance, from whence it derives its Name.

The End of the FIFTH BOOK.



THE



THE
NATURAL HISTORY
OF THE
Island of *BARBADOS*.

BOOK VI.

Of TREES, SHRUBS, *and* PLANTS,
of the BACCIFEROUS Kind.



Y Berries we are to understand those kinds of Fruits, whose outward Texture is generally of a thin flexible Make, and whose Insides are full of Pulp, mixed with small *Acini*.

Several of these, by their grateful Taste, and delicate Flavour, are not only very acceptable to Man; but Providence intended many Species of them to be a proper Food for several kinds of (1) Birds, which could not subsist, especially in the Winter

Months, without them.

(1) Quits and Pivets, &c.

The

The LIGNUM VITÆ, or GUAIACUM.

THIS very useful Tree grows here in Plenty, but not to any great Bigness.

Its medicinal Virtues, either by way of Dococotion, or the Use of its Gum, are sufficiently described by several Authors.

I shall therefore only observe, that the Berries, which are of a testiculated Form, and of a yellow Colour, inclinable to a Red, make an excellent Diet-drink, greatly assisting to purify the Blood.

The upper Branches are many, cloathed with several Pairs of small roundish pennated Leaves, never having an odd one at the End.

The Flowers are pentapetalous, and of the finest violet Colour that can be imagined; and the Tree is scarce ever to be found without Flowers or Berries.

This is delineated in *Plate IX.*

That called the *White Lignum Vitæ* scarce differs from this in any other Particular, but that it bears white Blossoms.

The BASTARD LIGNUM VITÆ.

THIS grows to above Twenty-five Feet high, covered with a rough brownish Bark.

The Heart of this Tree is almost as hard, and as durable, as Iron-wood. It is sometimes beautifully clouded with Veins of Yellow, and a dark Red.

The Flowers are succeeded by Berries, each near as big as a small Cherry: These are of a purple Colour, when ripe; and taste very agreeably. They are much coveted by wild Pigeons, Sparrows, and other Birds.

IRON-WOOD.

THE largest of these in this Island grow not above Thirty Feet high, and the Trunk in proportion somewhat slender.

This is covered with a whitish Bark, whose Surface often slightly peels off.

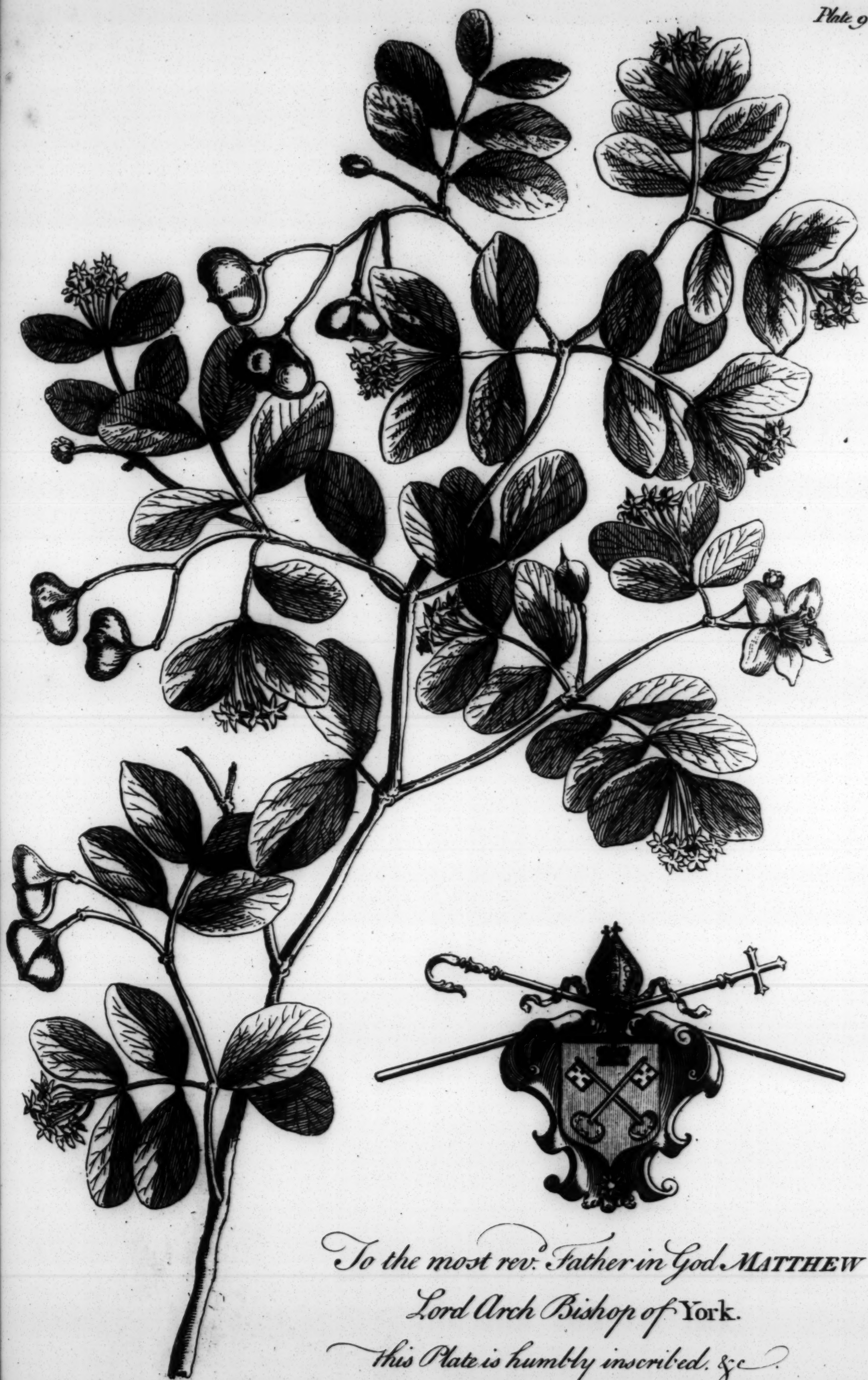
The Bark upon the upper Branches is of a reddish Grey.

The Leaves, which are smooth, and of a yellowish Green, are Two Inches and an half long, and above an Inch broad, narrow near the Footstalks.

The Flowers are many and white: These rise in Groups upon one common Pedicle, and are succeeded by small Berries half an Inch long, whose outward Tegument, as well as inward Pulp, is of the finest Red, interspersed with small Seeds.

It hath the Name of Iron-Wood from its great Weight, its Hardness, and the Closeness of its Grain; for it is proof against all Weather, and is scarce known to suffer any Decay in several Ages: It is so heavy, that it will sink in Water.

The



*To the most rev. Father in God MATTHEW
Lord Arch Bishop of York.
this Plate is humbly inscribed. &c.*



To his Grace the DUKE of NEWCASTLE
This Plate is humbly Inscrib'd &c.

The RED-WOOD.

THIS grows, especially if sheltered from the Wind, to be a very large Tree, affording Boards of a close fine Grain, of a reddish Colour, remarkably and beautifully clouded with black Veins.

The Trunk is cloathed with a dark-grey Bark, which is somewhat fulcated.

The Leaves on the upper Side are of a deep Green, and paler on the under: These are smooth-edged, and sharp-pointed, generally about Six Inches long, and Three broad.

The upper Branches bear many red Flowers, which are succeeded by middle-sized Berries, of a dark-purple Colour, when ripe, containing many reddish small Seeds.

These Berries are eatable, and looked upon neither unpleasant nor unwholsome.

It is said, that the young Leaves, applied to the Temples, give great Relief in the most violent Head-ach.

The WILD CINNAMON-TREE; *Lat.* CINNAMOMUM SYLVESTRE.

THIS Tree grows to a considerable Height.

The Trunk is cloathed with a brown rough fulcated Bark, which tastes hot and biting; and hath something of the Fragrancy of the true Cinnamon.

Its Leaves are of the Laurel-kind, smooth, green, and sharp-pointed: These are about Four Inches long, and one and an half broad; and, when bruised, yield an agreeable aromatic Smell.

It bears small yellow Flowers: These are succeeded by small red Berries.

The LOBLOLLY-TREE.

THIS is a middle-sized Tree, whose Leaves, which are about Three Inches long, are generally in Tufts upon the Extremity of the Branches.

Among these rise a great many Bunches of white Flowers.

These are succeeded by small white Berries.

They serve as Food for several Species of Birds.

The BALSAM; or *the* SEA-SIDE SAGE.

THIS is a large bushy Shrub, growing sometimes to about Nine Feet high, and its Leaves finely serrated.

A subtile refinous Juice perspires thro' the Leaves, and their small Footstalks; which, by the Heat of the Sun, is granated, and intirely incrusts them.

O o

This

This Incrustation, as well as the transparent Liquid, which instantaneously issues from the broken Footstalks of the Leaves, hath a fine aromatic Smell.

A few Drops of this, rubbed with the Finger on the Palm of the Hand, soon thicken to the Consistency of a Salve, tasting hot and bitter: This is excellently good to cure green Wounds.

This is delineated in *Plate X.*

The POISON-TREE ; Lat. TOXICODENDRON.

THIS is distinguished into Two sorts; the one bearing a small smooth-edged narrow Leaf.

The Trunk of this is very solid, and good Timber for Building.

The other bears a large green smooth-edged sharp-pointed Leaf.

The Timber of the latter is very soft and perishing.

From each of these Trees issues, when wounded, a great Quantity of milky corrosive poisonous Juice.

This, when exposed to the Heat of the Sun, turns so very clammy, that it proves a good Bird-lime, and is with great Success made use of to that Purpose.

Each of these Trees have their Branches near upright and spiral, clothed with a whitish grey Bark.

The Flowers are succeeded by a greenish-purple Berry, marked with slight indented Seams into Three Parts.

A Cataplasm of the new-extracted Juice, applied to the Feet, is of Service to kill the Vermin called *Chiggers*.

The ROD-WOOD.

THIS grows to be a large Timber-tree.

The Bark on the lesser Branches is of a light whitish Grey.

The Leaves, which are set on alternately, are of a yellowish Green, especially the middle Rib.

The Footstalks of these Leaves, at their setting off from these Branches, are remarkably welted with a strong greenish husky Substance, which surrounds the Footstalk, as well as the Branch. I take it that this Bandage is intended to secure and strengthen the Leaves; for, as the least of these are about Ten Inches long, and Five broad, their Weight would otherwise be too heavy for the smaller Limbs to bear.

This Tree bears round white Berries.

The BIRCH-GUM-TREE.

THIS grows to be a middle-sized Tree.

Its Bark is of a reddish Colour, and smooth, somewhat resembling that of a Birch-tree.

From

The Bay Berry
Tree



To the Right Honourable
The Earl of Halifax
First Lord Commissioner of
Trade and Plantations
This Plate is humbly Inscrib'd.
&c.

Myrtus Pimenta L. fr. P

G. D. Chrost. delin. & sculp.

From thence, and from the great Quantity of transparent Gum that its wounded Trunk and Branches afford, it derives its Name.

Its upper Branches sustain a great many small apetalous Flowers.

These are succeeded by several red Berries, near as big as small Cherries.

The Gum is looked upon to be very serviceable in all inward Bruises, or Strains, of what kind soever.

The Branches of this Tree, being staked into the Earth, will grow ; and I have known a Branch of it, tho' stripped of its Leaves, and exposed to Wind and Weather (as Part of an Arbour for a Grape-vine), which, in this Situation, budded, and put forth young Shoots and Leaves.

It grows in most Parts of the Island.

The BAY-BERRY-TREE ; Lat. MYRTUS arborea aromatica.

THIS is a beautiful upright Tree, its Trunk often of near Two Feet Diameter.

Its Bark, until the Season of its peeling off, is very smooth, and somewhat reddish.

The Trunk divides into numerous Branches, the lower always the longest ; so that towards the Summit it ends pyramidically, being very thickly cloathed with middle-sized sharp-pointed smooth very green Leaves.

This continual Verdure, added to its manner of growing, makes it appear very beautiful.

Its Berries are well known by the Name of *Jamaica Pepper*.

There is another of the same Species called the *Black Bay-tree*.

This differs from the other, chiefly by having its Bark and Leaves of somewhat a darker Colour than the above-described.

The WILD BAY-BERRY-TREE ; Lat. MYRTUS.

THIS is a far less Tree than that last-described.

Its Bark is as smooth as, and much redder than, the former.

Its Leaves and Berries are of the same Make and Texture with the true Bay-berry-trees.

However, the Berries want the Virtue, as well as the fragrant Smell, of the former.

BLACK-BERRY-HUNTERS.

THIS Shrub hath a great many strong Roots.

Its Trunk is covered with a dark-greyish Bark.

The Leaves are sharp-pointed, and in Length above an Inch and an half, and about an Inch in Breadth.

It bears white small Flowers, succeeded by small black Berries.

FIDDLE-

FIDDLE-WOOD-TREE.

THESE are common in this Island, and grow to a considerable Height.

They are distinguished into the White, the Red, and the Black sort.

The latter is by far the most durable Timber, and not often to be met with.

The Body of the Trunk is covered with a light-brown Bark.

Its upper Branches are thickly cloathed with Leaves of above Three Inches long, and an Inch and an half broad.

The Extremities of the Branches end in several slender pendulous green Strings or *Ligulae*, which are almost surrounded with small white pentapetalous sweet-scented Flowers, each standing in a small green *Calyx*.

These are succeeded by small pulpy Berries, which are at first of a green Colour; afterwards red; and, when ripe, black.

The BEE-WOOD-TREE.

THIS is a large shady Tree, cloathed with numerous smooth green Leaves, of Four Inches long, and Three broad.

These have a great many round Excrescencies growing on them in the Shape of Galls, tho' not much larger than a Grain of black Pepper.

These are Nests of some small Insects, which make an Hole in each of them; and then either creep, or fly away.

The Top-Branches bear several Bunches of small white Flowers.

These are succeeded by small Berries, whose Pulp is of a purple Colour, when ripe.

The FUSTIC-TREE; *Lat. MORUS.*

THIS grows to be a large Tree, having generally a strait Trunk.

The Bark is of a greyish Brown, slightly furrowed.

It bears Katkins; and the Fruit hath many *Acini*, which are as large as a large Strawberry, green within and without.

The Heart of this Tree is very yellow, and is well known for its Quality in Dyeing.

YELLOW HERCULES.

THIS grows to a middle-sized Tree, having a great many Roots.

It is chiefly distinguished from the White Hercules, by the Yellowness of the inner Bark, which, when properly prepared, affords an excellent yellow Dye: Perhaps it might be very useful in that Way, if in the Hands of skilful Dyers.

The outward Bark is of a reddish Grey, thickly covered with short stubbed Prickles.

The

The Leaves, which are set on alternately, are about Four Inches long, and Two broad, having their middle Ribs strong and prominent.

Its numerous small herbaceous Flowers grow in Clusters at the Extremities of their Stalks; and are succeeded by small round Berries.

The inner yellow Bark of the Root, bruised, and steeped in boiling Water, tinges it with a yellow Colour.

Washing sore Eyes with this Water hath of late been discovered to be a sovereign Remedy in most Disorders of the Eyes.

The PYE-CRUST.

THIS is a middle-sized Tree, having many strong Roots.

The Bark of the main Body is of a dark Grey.

The Leaves are very many, thick, smooth, and round-pointed, but very narrow towards their Stalks.

These are of a deep smutty Green on the upper Side, and somewhat lighter on the under, and set on the Branches in an irregular manner.

They bear several apetalous Flowers, which are succeeded by yellow Berries, of the Bigness of a middle-sized Olive, whose yellowish bitter Pulp incloses Three whitish Seeds.

The Texture of the Tree is very brittle, from whence it derived the Name of *Pye-crust*.

The DWARF MANGROVE.

THIS Shrub grows by the Sea or Pond-sides in wet Places.

The Trunk and numerous Branches are cloathed with shining green Leaves, Two Inches and an half long, and an Inch and an half broad.

Among the upper Branches are many small tubular Flowers, filled with yellow *Stamina*, succeeded by small Berries.

MONTABBA, alias TRUBBA.

THIS is a low shrubby Bush, divided into many Branches; the outside Bark of a whitish Grey, covered with an hoary Mealiness.

The Inside is of a ligneous Substance, which surrounds a greenish Pith.

The Roots are many and white.

The Leaves are set on alternately; and these are of a green Colour above, and whitish underneath; their Length about Five Inches, and above Three in Breadth, especially at such Places where they are bluntly and irregularly scalloped about their Edges.

The Flowers are monopetalous, and of a reddish White, expanding, in the Heat of the Day, almost horizontally flat; their *Oræ* being slightly segmented, and divided into Six sharp-pointed Angles.

From the Centre of the Flower rises a white Pistil, surrounded by Six yellow thick triangular *Stamina*.

The Flowers are succeeded by a Pumkin-like Fruit, of a fine deep Purple on the Outside, and whitish within; the Pulp interspersed with white flattish Seeds.

This Fruit is boiled and eaten as a Pumkin.

The small RED TRUBBA.

THIS Plant grows to about Four Feet high.

Its Branches, as well as the Leaves, are few and straggling; the latter about an Inch and an half long, and an Inch broad.

Its Flowers are composed of Five white Petals, surrounding several *Stamina*.

These are succeeded by a scarlet Button, whose Inside is full of Juice, and small whitish *Acini* or Seeds.

This Fruit is chiefly used by Negroes, in their Soups.

It hath, when boiled, a bitterish Taste; and is by them looked upon as useful to alleviate any colicky Disorder of the Stomach.

TAMMATAS SHRUB; *Lat.* LYCOPERSICON.

THIS is likewise a shrubby Plant, much resembling, in its Make, that which produces the Bachelor's Pear; with this Difference, that the Prickles on this are not so stiff.

The Fruit is about as big as an Hen's Egg, red when ripe.

They are generally made use of, boiled in Broth.

These were brought hither by his Excellency Governor *Worsley*, from *Portugal*.

The MAIDENHEAD.

THE shrubby Vine, bearing this Fruit, grows very bushy, and about Three Feet high; its Bark bearing a red Fruit, but not eatable.

*The BULLY-BERRY-TREE; *Lat.* CAINITO.*

THIS grows to be a very large Tree, branching chiefly towards the Top.

It bears a round Fruit, of a russet-yellow Colour, standing upon an Inch and a Quarter Footstalk.

The inside Pulp of the Fruit is milky, and of a soft sweet Taste, not unlike a Sappadillo.

It is about the Bigness of a very large Cherry, but not depressed at each End.

The Pulp incloses a very sharp-pointed oval Seed.

SOAP-BERRY-BUSH, or FIRE-BURN-LEAF;

Lat. SAPINDUS.

THIS is a scandent ligneous jointed Vine, whose Heart-like Leaves are thin, and sharp-pointed.

These are, in general, of about Four Inches long, Two and an half broad, and high-ribbed.

Almost every Leaf is supported by a crooked Tendril, which takes hold of the neighbouring Trees or Shrubs.

The Leaves, when bruised, and agitated in Water, will cause as strong a Lather as an equal Quantity of Soap,

The Juice is likewise very much esteemed to heal and cure Fire-burns, Scalds, or such-like Sores.

The BASTARD LOCUST, or FOREST-TREE.

THIS grows to be a large Tree, cloathed with a whitish Bark, red within.

Its Leaves are of a dark Green, about an Inch and an half long, smooth, and very blunt-pointed.

The Bark is used as an Astringent.

The VERVAIN; Lat. SHERARDIA SPICATA.

THE Roots of this shrubby Plant are very numerous, and white, penetrating not deep into the Earth.

The main Stalk, when full-grown, is as thick as one's Finger, woody, and brittle; soon dividing into many lesser Branches.

These are jointed, putting forth, at every Joint, Duplicates of winged Leaves within one another; whose Edges are regularly ferrated, and of a middle Size, ending very narrow towards the Stalks; the Stalks themselves terminating in long scaly Spikes.

Round the Middle of these rise several small naked tubular monopetalous Flowers, of a fine blue Colour; whose Edges are divided into Five Segments, having likewise a whitish Spot in the Middle.

The Seeds, which are longish, and small, are included in the several *Laminae*, or Foldings, of these Spikes.

The Juice of this Plant is so great a Decobstruent, that a large Spoonful taken inwardly, for Three or Four Mornings successively, hath been more powerful to bring down the *Catamenia*, than either the Use of Chalybeats, or any other Method.

This Plant grows in most Parts of the Island.

The MASTICH-TREE; Lat. CALABA.

THIS often grows to a great Height.

The Colour of its Bark is brownish.

The

The larger Branches divide into a great many less ones ; and are thickly cloathed with deep-green shining Leaves, whose middle Ribs are tinged with Yellow.

These are about Three Inches long, and near Two broad.

Their Edges are neatly labiated into several easy *Sinus*'s, and set on the Branches alternately, supported by Footstalks of about an Inch long.

The Flowers are yellow, and succeeded by a Fruit, which hath a distant Resemblance to a Shrub.

This Tree is of a very close Grain, hard and durable ; therefore much made use of in Mill and House-building.

The CASSADO-TREE ; MANIHOT.

THE Cassado-trees, or rather Shrubs, are pithy on the Inside ; and seldom grow higher than Five Feet.

They are distinguished into the White, and Old Sort ; the former being ready to be rooted up, and used, in about Four Months after it is planted ; and its Juice is not so strong a Poison as the other old Sort.

The Root, which is the Part used in both, is large and white, and so soft, that it may be easily grated.

These Shrubs have a few weak Branches.

These, as well as the main Trunk, towards their Extremities, are cloathed with many large digitated Leaves upon reddish Footstalks, of about Six Inches long.

The Flowers are deeply divided into Five Sections, whose Edges are tinged with a pale Purple.

Out of the Centre rise Eight *Stamina*, tipped with yellow farinaceous *Apices*.

Five of these *Stamina* fall back, and lean against the different Sections.

The Flowers are succeeded by many small round green Berries, whose Outside is divided into Five selvaged Seams, the Inside containing Three blackish Seeds.

The Method of making Bread from the Roots is, first, to grate them very fine, and press out the Juice, and dry the mealy Part in the Sun ; and then make it into thin Loaves, like those made with Oatmeal in many of the Country Parts of *England*, *Scotland*, and *Wales*.

This Bread is well tasted, and nourishing ; and, by its absorbent Quality, it is highly serviceable to Persons of a plethoric Habit, or inclinable to Dropsies.

The Juice is a quick mortal Poison to every Animal.

Having tried an Experiment upon Two half-grown Fowls, by pouring down their Throats Two Tea-spoonfuls of this Juice, newly expressed, it soon threw them into Convulsions ; and they both died in about half an Hour's time.

LEATHER-COAT-TREE.

THIS grows to a considerable Height.
The Bark is of a darkish Colour.

The Branches are many and straggling, their Tops generally bending downwards.

The younger Twigs are seemingly jointed.

These are cloathed with broad Leaves, reddish when young, whose Stalks, as well as their Ribs, are then thickly covered with a pale-yellow Pile, or soft-pointed *Setæ*.

The Leaves, as they grow old, turn green, being then in Length about Ten Inches, and Twelve in Breadth, having their middle, as well as their transverse Ribs prominent and strong.

From the Bosoms of the Leaves rise many Six-inch long Spikes, surrounded with small Berries, red when ripe; the Inside being likewise full of reddish Pulp, inclosing several small darkish Seeds.

CLAMMY CHERRY-TREE; *Lat. MALPIGHIA.*

THIS Tree grows to a considerable Bigness, covered with a greyish Bark.

The Leaves are in Bunches from Three to Five, upon the Tops of the lesser Twigs.

These are about Five Inches long, sharp-pointed, and near Two Inches and an half broad.

The Flowers are of a pale-yellow Colour; and the succeeding Fruit, when ripe, as big as a middling Cherry.

These grow in Clusters, of a fine red Colour.

The Pulp is very clammy, and surrounds a great many small Seeds.

The BLACK CHERRY-TREE.

THIS very much resembles the red Cherry-tree, except that the Leaves of the black Cherry-tree are somewhat larger, smoother, and thicker, than the four Cherry.

The Leaves often grow close to the Branches; and, when upon the lesser Twigs, they are pennated.

From among these rise the Flowers, which (except in Colour, which is red) very much resemble those of the Coffee-tree.

These are succeeded by small blackish Berries.

The RED CHERRY-TREE.

THIS Tree seldom grows above Eighteen Feet high.

Its Branches are numerous, but small, and cloathed with a great many deep-green round-pointed Leaves.

From the Bosom of these rise many Footstalks, supporting small Five-leaved Flowers.

Their Petals surround several green *Stamina*, tipped with yellow Summits.

The whole Flower is supported by several small capsular Leaves, and succeeded by the Fruit, which is red, when ripe; of about the Bigness of a small Cherry, but more compressed at both Ends.

These are of an agreeable sweet, mixed with an acid Taste.

The Inside is full of small whitish Seeds.

The BELLY-ACH.

THE Roots of this Shrub are few in Number, and white, penetrating deep into the Earth.

The main Stalk, which is covered with a light greyish Bark, grows to about Three or Four Feet high, soon dividing into several wide-extended Branches.

The Body of the Shrub, within Three Inches of the Ground, swells, or bulges out.

From this Swelling, by Incision, is taken out, when ripe, a rough granated Core or Kernel, of a pale Red, and sometimes near as large as a Pullet's Egg.

This is extraneous to the Nature of the Shrub, and as distinctly separable from it, tho' in close Contact with it, as a Peach-stone is from the pulpy Part thereof.

It is also of the same Nature and Quality as Hellebore; and answers, to all Intents and Purposes, the Use of it.

The Branches of the Shrub are neither decorated with Leaves nor Flowers, till near the Top: There the former, which are deeply segmented into Three or Four Divisions, surround it.

These, including the Sections, are about Five Inches long, and near as broad.

Their Footstalks, as well as the young Buds, on the Extremity of the Branches, are guarded round with stiff hairy Bristles, which are always tipped with glutinous liquid Drops.

From among these rise several small deep-red pentapetalous Flowers; the Pistil of each being thick-set at the Top with yellow farinaceous Dust, which blows off when ripe.

These Flowers are succeeded by hexagonal husky blackish Berries; which, when ripe, open, by the Heat of the Sun; emitting a great many small dark-coloured Seeds, which serve as Food for Ground-doves.

The Leaves of this Shrub are few, and seldom or never drop off, nor are torn or eaten by Vermin of the *Eruca*, or any other kind.

As Nature makes nothing in vain, I beg Leave to conjecture, that this clammy Liquid, like Bird-lime, with which each of the above-mentioned

Setæ

*Lamproloma
gobipifolia*

Setæ or Bristles are tipped, is designed to intangle and prevent Caterpillers, or other Vermin, from climbing up to destroy the few Leaves, with which Nature hath so sparingly supplied this Plant.

As for other Plants, which are not thus guarded, as their Leaves are generally very numerous, if some of these are destroyed by Worms, they soon, in so warm a Climate, recover this Loss, and the Plant renews its wonted Verdure.

Perhaps, likewise, this gluey Substance may be of further Use, if gathered by Butterflies, or other flying Insects (especially the former, which are often seen hovering about the Flowers), to glutinize their Bags or Webs, before they enter into their *Aurelia*-state.

The Seeds dropping from the ripe Berries are so great a Specific against Melancholy, that even Doves, that have used to feed on them, will not, when confined to a Cage, whoot, if deprived of these, and Bird-pepper.

It is said, that Fifteen of the Berries, pulverized, and taken inwardly, prove a good Purge.

It grows in every Part of the Island, but most luxuriant in a sandy loose Soil.

This is delineated in *Plate XI. Fig. 1. V. p. 252*

The PRICKLY HOOP, or the WHITE THORN.

THIS derives its Name from the Use that is sometimes made of it to hoop Vessels.

The main Stalk, when full-grown, is generally bigger than one's Arm, dividing, near the Ground, into many prickly Branches.

These grow, especially if supported by low Underwood, to sometimes near Thirty Feet in Length.

The Bark is of a whitish Grey.

The small Side-branches, as well as the Leaves, are set on alternately.

The latter are, near the Stalk, about Two Inches in Breadth, and Two Inches and an half in Length, ending in a long sharp Point.

Their Edges are slightly snapped, and the Colour of the Leaf of a faint Green, inclined to a Yellow.

The middle Rib is strengthened, besides the transverse ones, with Two, or sometimes more, longitudinal strong Veins, or Ribs.

The Flowers are succeeded by middle-sized Berries, red when ripe.

These are sometimes eaten by Men, but chiefly by Birds.

The ALOES PLANT; Lat. ALOE vulgaris.

THIS very succulent Plant hath one large Root, with a great many other small stringy Roots growing from it.

The Number of Leaves are generally about Twenty.

These,

These, near the Roots, are Two Inches broad, and near one thick, growing to Eighteen or Twenty Inches high, ending in a sharp Point.

Each Side of the Leaf is guarded, at every Half-inch Distance, with a strong small Prickle.

Out of the Middle of these Leaves rises a slender conic Stalk, sometimes divided into Two Forks, at uncertain Distance from the Root.

This rises about Eighteen Inches above the Top of the Leaves, bearing, near the Summits, several pendulous yellow monopetalous Flowers, whose *Orae* are divided into Six Segments; these surrounding the Stalk for near Four Inches downwards from the Top, making a very agreeable Appearance.

Each Flower hath a small Aperture at the End; thro' which a great Number of small blackish Seeds drop out, when ripe.

It will not, I hope, be improper, in this Place, to observe the Method of planting, cutting, and boiling of Aloes, since there are many Parts of his Majesty's Plantations, besides these Summer-Islands, that would produce this Plant, with proper Care and Nourishment.

The Land designed for Aloes must be first weeded clean, and then holed Three Inches deep, at about Six Inches Distance.

Then the Suckers from the old Plants, or those produced from the Seeds, are planted in these Holes.

The Land, for the first Year, must be kept clean from Weeds; afterwards, the Shade of the Leaves of the Plant will keep the Weeds under.

Being thus planted, there will be no Occasion to replant it for Seven Years.

It comes to its Perfection in a Year's time.

The Month of *March* is the properest Season to make the Aloes; which is done in the following manner:

Every Slave hath by him Three or Four portable Tubs.

The Leaves, being cut near the Roots, are thrown into these, with their broken Ends downwards; and as the Leaves are full of large longitudinal Veins or Vessels, they yield an easy Passage to the Juice (which is of a greenish-yellow Colour) to drip out.

This being boiled for about Five Hours in a Copper, or Kettle, the watry Particles evaporate; and the Remainder comes to a Consistency, and thickens, as Sugar doth when sufficiently boiled.

The way to know when it is enough boiled is, to dip a Stick in the Liquor, and observe whether the Aloe, sticking to it when cold, breaks short: If it doth, then it is boiled to Perfection, and fit to be poured into Gourds or Calabashes, or other Vessels, for Use.

Aloe is much made use of in Purges, and justly esteemed of great Service in many Cases.

However, Dr. *James*, in his Medicinal Dictionary, says, it ought not to be given to Women with Child, nor to Persons subject to the Piles; for it rarefies the Blood too much, and causes Hemorrhoids.

HEN-

HEN-TURD, or DART-WOOD.

THIS grows in spiral Branches from the Root, but seldom above Twelve Feet high, each seemingly jointed at about Twelve Inches asunder.

The Wood is of a very close Grain, and heavy; very little inferior in Solidity to Box-wood.

It hath the Name of Dart-wood, from the former Use made of it in Lances and Darts; with which, by the Permission of our Laws, Negro Watchmen were to be armed, to defend their own, or the Goods of their Masters, from Robbers. However, a late Custom hath allowed these the Use of Swords.

The Name of Hen's-turd was likewise given it from the blackish unfavoury Pulp of the Berry, which it bears.

This succeeds a small white Blossom.

The Berry itself, when ripe, is of a brownish Colour.

The CRAB-BUSH, or *the* SEA-SIDE LAUREL.

THIS is a small bushy Shrub, thickly cloathed with green stiff shining Leaves, many in Number, and about Three Inches long.

These are narrower at the Stalk than their Extremities.

They bear many apetalous Flowers, succeeded by brownish Berries.

These, when ripe, are greedily eaten by the Land-crabs.

The WHITE SAGE; *Lat.* CAMARA SALVIÆ.

THIS is a thick bushy Shrub, growing to about Two Feet high.

Its Leaves are small and rough, of a whitish Grey, and thick-set, generally Three together round the Stalk, in a triangular manner; their Edges being bluntly ferrated.

The Flowers are of the galeated, monopetalous kind, divided at their Extremities into Four unequal Segments, of a pale Red, altering generally at the *Discus* to a bright-yellow Colour.

These Flowers are many in Number, supported upon Stalks rising from the Bosom of the Leaves; the tubulous Part serving for Seed-vessels.

Each Flower is succeeded by a small purplish Berry.

These serve for Food to Sparrows, and other Birds; and the Leaves of the Shrub, being either boiled into a Decoction, or made into Tea, are an excellent Sudorific and Pectoral.

It grows chiefly in dry Places, and flourishes all the Year round.

The MISLETOE, or BIRD'S TURD.

THE Origin of this Shrub is a small white Berry, containing a very glutinous milky Juice.

These, when ripe, are eaten by Birds; and by them often voided upon other Trees, where they stick very fast, and soon after germinate.

I am apt to believe, that this brownish Juice hath likewise a corrosive Quality, which frets and wears away the outward Bark of the Tree on which it sticks; by this means opening a Passage for the new tubular Roots of the Berry, to penetrate among those larger Vessels of the Tree, thro' which the nutritious Juices are conveyed.

These Roots being thus able to suck Nourishment, the young Sprout soon grows generally at first in Two or Three spiral Convolutions or Twistings round the Branch: By thus grasping, it not only strengthens its weak Roots, and takes a firmer hold of the Tree; but such a Ligature, as it grows, sinks deep into the Bark, and prevents, in a great measure, the further progressive Motion of the Juices; so that these, receding but a little Way back towards the Root, are absorbed, and sucked up, by the numerous Mouths in the Roots of this fostering Shrub, which daily penetrate more and more into the Tree.

What confirms me in this Opinion, is, that the Branch, from the Place where the Mistletoe takes Root, to the Top, is generally in a very decaying Condition.

The Leaves of this parasitical Shrub are of a dark Green, set on in a pennated manner, never terminated by an odd one.

This grows to about Three Feet high, and bushy, bearing a small white Flower, succeeded by a Berry, as above described.

The milky Juice, being squeezed out, is made use of to cure Fluxes and Lasks.

It grows chiefly upon Orange-trees.

The NARROW-LEAV'D MISSLETOE.

THIS grows in Tufts, consisting of Six or Seven narrow Leaves, of about Six Inches long.

They are generally to be found in the Clefts of the Bark of Cedar-trees.

The SPIRIT WEED.

THIS is a strong Shrub, having many substantial Roots.

Its Leaves are pennated about Three Inches long, and sharp-pointed.

The

The Flowers are yellow, standing upon long Footstalks, rising generally from the Bosom of the Leaves, and of the tetrapetalous Kind.

These are succeeded by a small Berry, of a dark-red, when ripe; containing sometimes Two or more blackish Seeds.

A Decoction of this Wood is esteemed to be a strong Diuretic.

The PIGEON-WOOD.

THIS is a shrubby Tree, seldom growing to above Six Feet high.

The Wood is very solid; and the Bark whitish.

Its numerous small Branches are thickly cloathed with small round-pointed winged Leaves.

The small white Blossoms it bears are succeeded by a great many white Berries.

The SWEET WOOD-TREE.

THIS is of Two sorts; the one bearing a Berry like a Damascen.

That which bears the white Bark is the best and most solid Timber.

That with the green Bark, and white within, is of less Value.

The Leaves of the former resemble those of the Bay-tree.

These are set on alternately.

The Berries are supported by small Pedicles, rising from the Bosom of the Leaves.

These, when ripe, are eaten by Pivets, and Ground-doves, &c.

The BALSAM-TREE.

THIS is a middle-sized Tree, growing generally in Gullies, and shady Places.

Its Roots are few, but strong.

The Colour of the Bark is of a reddish Grey.

Its Branches are many and spiral, thickly cloathed with very smooth shining succulent Leaves, pale underneath, and green above.

These are narrow at the Stalk, but broad and round-pointed at their Extremities.

Their Edges are smooth, and tinged with a pale Yellow.

The Flowers consist of Six strong white Leaves, surrounding a yellowish Thrum, and supported by Four white capsular Leaves.

The Stalks bearing the Flowers are long, white, and brittle.

The succeeding Berries are of an oblong Shape, about the Bigness of a Nutmeg, and of a deep Red, when ripe.

These are decorated with a *Corona* at the Top.

The

The Berry is likewise marked with Six unindented Seams of a blackish Colour, seemingly dividing it into so many Partitions.

The Leaves, Stalk, and Fruit, when broken, emit a white glutinous Liquid, which will harden by the Heat of the Sun.

The LIGNUM RORUM.

THE Bark of this shrubby Tree is of a dark Green, streaked with White, especially on the younger Branches.

These are covered with smooth deep-green round-pointed Leaves, Five Inches long, and near Three broad.

The smaller Twigs sustain Bunches of white Flowers, each composed of Six Petals surrounding Six slender pale yellowish *Stamina*.

These inclose a whitish Pistil, which is succeeded by a small Berry of a purple Red, when ripe.

The younger Branches are seemingly jointed.

These, and every other Part of this Tree, have so much of a terebinthial Quality in it, that it will, when even half-dried, burn like a Candle.

From this Quality it derives the Name of *Jack-Lantern*; for, being tied into Fagots, and lighted, it serves the Fishermen instead of Torches, to fish in the Night-time for Crabs and Lobsters.

It grows generally in shady Places.

The COFFEE-TREE; *Lat. JASMINUM ARABICUM.*

THE Coffee-tree, if sheltered, grows to be about Fifteen Feet high, tho' its common Growth seldom exceeds Twelve.

It divides into several slender Branches, generally spiral.

The Bark likewise is of a smooth reddish-grey Colour.

The Branches are cloathed with Four-inch long sharp-pointed dark-green Leaves, their Edges being waved or sinuated in an elegant regular manner.

Among these Leaves rise a great many Five-leaved white Flowers, each Petal being round-pointed; the Whole surrounding several short white *Stamina*, loaded with *Apices*.

These likewise surround the Pistil, which is the Rudiment of the succeeding Berry.

This, even when ripe, is covered with a thin husky *Capsula*; which, when sufficiently dried in the Sun, easily cracks, and discovers the Berry, which is too well known to want a further Description.

Box-Wood.

THIS Shrub is covered with a whitish-grey Bark.

Its Leaves are about Two Inches long, and One broad; and are generally sharp-pointed.

These are set on the Branches alternately.

The Flowers are of the tubular stellated Kind, succeeded by small Berries, which are eaten by Birds of different kinds.

This Shrub generally grows in the Shade: Several of these are to be found on the Estate of *John Colliton, Esq;* in *St. Lucy's* Parish.

The WILD HONEY-TREE.

THIS Tree grows to a considerable Bigness.

The Bark is somewhat fulcated, and of a reddish-grey Colour.

The Leaves are of a deep Green, smooth, and winged, exactly resembling Ivy-Leaves.

Its white Flowers are succeeded by Berries, somewhat round, as big as a Cherry.

These are of a snowy White without; and the Pulp within (which is as sweet as Honey, and as yellow as Gold) is divided into Partitions, including many small Seeds.

I found this Tree on a small Grove belonging to Mr. *Joseph Jordan, jun.* in *St. Lucy's* Parish.

The BLACK CHERRY-TREE.

THIS Tree seldom rises above Eighteen or Twenty Feet high.

The Bark is of a russet Grey, and the Branches thickly cloathed with dark-green Leaves of about Two Inches long, and one and an half broad.

The Flowers are white, and of the rosaceous Kind.

These are succeeded by small black Cherries, somewhat larger, and more compressed at both Ends, than the *English* Black-cherry.

Their sweetish Pulp surrounds a soft Kernel.

They are generally ripe in *August* and *September*, and are eaten by Men as well as Birds.

This grows in almost every Parish in the Island.

The BLACK SAGE-BUSH.

THIS hath a great many strong Roots.

The main Stalk is cloathed with a blackish Bark.

The Leaves, which are high-ribbed, and corrugated, are about Two Inches and an half long, and above One broad.

S f

These

These are set on alternately.

The Top-branches sustain a Spike, thickly studded with very small stellated Flowers, which are succeeded by as many small sharp-pointed Berries, red when ripe.

The Leaves, as well as the whole Shrub, have a strong Sage-like Smell.

A Decoction of these is justly looked upon to be an excellent Sudorific.

It grows in most Parts of the Island.

The INK-VINE.

THIS is a creeping weak Vine, supported by the neighbouring Rocks, or Underwood, &c.

Its Leaves are of a middle Size, divided into Three deep Sections.

It bears many blue Flowers.

These are succeeded by small Berries, very black within.

This Vine grows in dry shady Places.

The Juice of this Vine is so black, that it resembles Ink, from whence it derives its Name.

CHIGERY-BUSH.

THERE is scarce any Difference between this and what we have already called *Soldier-bush*.

And, as the latter, in some Parts of the Island, go under the Name of the former, I take the only Distinction between these seemingly different Plants to be more owing to either the Male or Female kind, or to the more luxuriant Growth of this same Plant in various Soils, than to any other real Difference.

It grows generally in shady Places.

The WILD CALABASH.

THIS is a Shrub, growing about Ten Feet high, the Branches being generally very strait, thickly covered with long green Leaves; in Shape not ill resembling those of a Laurel.

From the Bosom of the Leaves, on short Footstalks, arise a great Number of small Berries, black when ripe.

These are eaten by Pivets, and other Birds.

CAT'S-BLOOD.

THIS is a small weak Shrub, cloathed with a Bark of a reddish Grey.

The lesser Branches are geniculated.

The

The Leaves which thickly cover these, are about an Inch and a Quarter long, and about half an Inch broad, and sharp-pointed, bearing, on slender Spikes, several very small Four-leav'd Flowers.

The Pistil, which grows from the Centre of each, is tipped with an Apex, and succeeded by a small red Berry.

A Cataplasm of this Plant, bruised, is very justly looked upon to be a good Vulnerary.

It grows chiefly in shady Places; and blooms in June and July.

I have found this Plant in great Plenty in the Parishes of St. Peter and St. Lucy.

The SOLDIER'S-BUSH.

THIS Plant is jointed, at different Distances, from Three to Eight Inches asunder.

Its Roots are strong and fibrous; the main Stalk, and its divided Branches, growing often above Four Feet high.

The Leaves are near Six Inches long, and Four broad.

Its upper Side is thinly beset with very short hairy Bristles.

From the Top of the Branches rise small white Flowers.

These are succeeded by small white Berries, spotted with Black.

There often grows at the Root of this Plant a fungous Excrecence, which answers the End of Touchwood.

It is justly esteemed an excellent Vulnerary, and with great Success, made a Part of most kinds of healing Salves.

POPS; *Lat. ALKEKENGI* Indicum majus.

THIS Plant hath a fistular quadrangular Stalk, growing to about Two Feet high, clothed with thin slender Leaves, Four Inches long, and Two broad, having their Edges, at uncertain Distances, neatly snipped.

Upon the Top of the Stalks appear several yellow apetalous Flowers.

These are succeeded by thin bluish capsular Pods, which inclose a round green Fruit of about the Bigness of a small Cherry.

As this ripens, and turns yellow, the outward Pod, or Covering, which is of a blunt conic Form, withers, and drops off.

The Fruit is full of small Seeds, not disagreeable to the Taste.

They are justly looked upon to be very diuretic.

There is another Plant, which bears the same kind of Fruit.

This differs from that already described, by being a creeping scandent Plant, and its Leaves shorter and thicker than the former.

This is called the *Pop-Vine*, and grows in most Parts of the Island; especially under the Shelter of Hills.

The

*The BERRY-BUSH, or HEDGE-BUSH.**Solanum?
ignum*

THIS often grows to about Seventeen Feet high, cloathed with green Leaves, Six Inches long, and an Inch and an half broad.

These are set on the Branches alternately, having their middle Ribs thickly guarded with sharp reddish Prickles.

The Ends of the lesser Branches sustain a great Number of white Five-leaved Flowers.

These Petals surround a yellow Pistil, divided at the Top.

This is succeeded by a small red Berry, which is looked upon to be very wholesome: However, its Taste is not very agreeable, and therefore seldom eaten by Men.

*Irony & such. The Bark
the fruit wholesome but not pleasant &c.*

The WILD PEPPER-GRASS.

THIS hath a great many strong stringy Roots, penetrating about Five Inches into the Earth.

The Bark of the main Stalk is greyish, soon dividing into numerous small Branches, thickly covered with very small sharp-pointed Leaves.

From among these rise very many Pedicles, supporting several small Star-like Flowers, succeeded by very many capsular round Pods, inclosing a great many very minute russet Seeds.

The whole Plant seldom grows above Two Feet high.

It is to be found in almost every Part of the Island.

The FIRE-BURN WEED.

THE main Stalk of this Plant grows to be about Three Feet high. It is generally of a green Colour, channelled and pithy.

The Leaves are about Three Inches long, and Two in Breadth, having their middle, as well as their transverse Ribs strong and prominent.

From among these rise a great many Footstalks, or Pedicles, of a pale Red, supporting, upon a Spire, a great many small white-leaved Flowers, each consisting of Four Petals, surrounding a white Pistil.

These are succeeded by many small Berries, red when ripe; whose Pulp (which inclose a great many blackish Seeds) is likewise as red as Blood.

GOOSEBERRY SHRUB.

THE main Stalk of this scandent Shrub divides near the Earth into many lesser ones.

The Bark of these is of a dark-yellowish Green.

The Leaves which grow in Pairs upon one common Footstalk, are small, smooth, and succulent, having their Edges somewhat tinged with Yellow.

The

The Flowers are succeeded by Berries about as big as a middling Gooseberry.

These are coronated at the Top; the Inside containing, in an agreeable sweetish Pulp, several small *Acini*, like those of Gooseberries.

This Berry is, above all others, remarkable, by a great many small Leaves, which grow upon the Outside of it.

The several Branches of this Shrub are likewise guarded with very sharp-pointed Prickles.

I found this growing in great Plenty on the Estate of the Honourable *John Maycock*, Esq; in *St. Lucy's* Parish.

The WILD CATERPILLER; Lat. BLITUM Americanum spinosum.

THIS chiefly differs from the eatable Sort, by the Smallness of its Leaves, as well as that the several Tufts of Leaves are guarded near the main Stalks with Two or Three sharp-pointed Prickles.

These are likewise of the red and white Sort, differing scarce in any thing but Colour.

They grow chiefly in open Fields; especially at the Plantation of the Honourable *William Maynard*, Esq; in *St. Thomas's* Parish.

The MILK-WEED.

THIS lactescent Plant is distinguished into the red and white Sort. These seldom rise above Fifteen Inches high.

The main Stalk, with its slender Side-branches, is thickly covered with several Pairs of small pennated Leaves, something inclinable to an oval Shape, having their Edges finely serrated.

From the Bosoms of the Leaves rise a great many small Pedicles, sustaining on their Summits a Group of very small, scarce perceivable, white tubular Flowers.

These are succeeded by small Berries

The Roots or the Stalks of this Plant, when wounded, emit a milky Juice.

It grows in most Parts of the Island, and is made use of as Part of the Ingredients in Diet-drinks, to cleanse the Blood.

DOVE-WEED.

THIS small Plant seldom rises above a Foot high.

Its Roots are fibrous and many.

Its main Stalk divides into several Side-branches.

These are very thickly clothed in an alternate Order, with small oval Leaves, not ill resembling those of Tamarinds.

Its Flowers, which are monopetalous, whose *Ora* are divided into Five Sections, are succeeded by small *Capsule*, somewhat resembling Berries.

The small Doves feed on these; and from thence this Plant derives its Name.

This Plant, reduced to Powder, is a great Drier-up of old Sores.

The milky Juice, which issues out of the Stalk, is looked upon to be good to destroy Warts.

It grows in most Parts of the Island, especially in rocky or gravelly Soil.

Venercal Disease *Mr. Keet 1781*
GUMMA-BUSH.

THIS grows to be about Eighteen Inches high, the Stalk very green and succulent.

The Leaves are about Two Inches long, and above an Inch broad; their Edges being irregularly and deeply serrated.

From among the Leaves arise a great many white small Five-leaved Flowers, inclosing broad close yellow *Stamina*, surrounding a green *Stylus*.

The Flowers are succeeded by very round small Berries, black when ripe.

The Leaves of the Plant are made use of by the Negroes, as boiled Sallad; but seldom, if ever, made use of by the White Inhabitants.

The WHITE HERCULES.

THIS differs chiefly from the other by the Colour of its inner Bark, which is white.

The Flowers are very small, and of the herbaceous Kind.

These are succeeded by a capsular Bunch, full of small black oval Seeds.

The Buds of this Tree, boiled into a Decoction, are very good to cure a Distemper called the *Red Water* in Cattle.

This grows best under the Shade of an Hill.

BOUMBO BUSH.

THIS Bush hath a very offensive strong Smell.

It grows to about Two Feet high, thickly clothed with Leaves.

It grows in most Parts of the Island.

PURSLAIN, WHITE and RED.

THESE differ very little, if any thing, from those in *England*, except in the Rankness of their Growth here.

They are generally boiled and used, when more valuable Greens are not in Plenty.

The ARABIAN JESSAMMY; *Lat. JASMINUM* five Sambac Arabum.

THIS is a woody creeping Vine, cloathed with dark-green sharp-pointed Leaves, of about Two Inches long, and one broad, bearing Seven-leaved white fragrant Flowers.

These are supported by Seven very sharp-pointed graminous Leaves.

This is planted chiefly in Gardens, or near Dwelling-houses.

It yields a very agreeable fragrant Smell, and keeps its Verdure all the Year.

TITHYMALOIDES.

THE Roots of this are very numerous and strong.

The main Stalk branches near the Earth, into many spiral strong Twigs.

The Bark of the Trunk, near the Roots, is smooth and whitish; but all its Branches of a deep shining Green, keeping their grateful Verdure undiminished thro' every Season of the Year.

These are cloathed with thick succulent green round-pointed Leaves, of about Four Inches long, and Two in Breadth, having their smooth Edges a little tinged with Yellow.

These are likewise set on the Branches alternately.

The Flower, which is of a fine deep Red, cannot be reduced to any Class that hath hitherto been described by any Botanical Writer, it being a triangular sharp-pointed small horizontal Sheath; the Top of the Pistil jutting out, making the Extremity of the longest Angle: This, on the Inside of the Flower, is covered with a yellow farinaceous Dust.

From the same narrow Aperture appear several small *Stamina*, tipped with green *Apices*.

These Flowers are succeeded by triangular small Berries, of a dark Red when ripe.

Each of these incloses Three angular Seeds.

The Berries, Branches, and Leaves, are full of a thick glutinous milky Juice.

The only Place that I have seen this was at *Cluff's Bay*, in *St. Lucy's* Parish.

This very seldom grows in any other Part of the Island.

The

The small WILD CUCUMBER.

THIS is a small Vine, creeping generally along old Walls. Its Leaves are thin, and sharp-pointed, of about an Inch and an half long, and as broad near the Stalk, where they grow out, as it were, into Ears.

The Flowers are succeeded by a small smooth Fruit, of about the Bigness and Form of a Thimble.

These, when ripe, are of a bluish black Colour, and are eatable.

The POISON-WYTH.

THIS is a large scandent ligneous shrubby Vine, whose Roots are very many, and strong; and the main Body of the Wyth, near the Ground, as large as one's Arm, and somewhat flattish.

This climbs to a great Height, and is cloathed with sharp-pointed green Leaves of above Three Inches long, and near Two broad.

If the main Stalk is cut off near the Ground, or at any Height, the upper Part, covering the Trees or Rocks, will still survive, and in a short time send down, from several Parts, long stringy Filaments; which, growing downward, take Root, and supply the Place of the broken-off Stalk.

The Flowers are, in Appearance, like a Bunch of red Coral, succeeded by small Berries, black when ripe.





TREES, SHRUBS, and PLANTS,
OF THE
Capsule-bearing F R U I T S.

BOOK VI.

The PRICKLE-YELLOW-WOOD; *Lat.* Xanthoxylum.

THIS is a Timber-Tree, growing large enough to be saw'd into Planks, or Boards, for Tables, and other Uses. Its Roots are many and strong. The Wood is of a very fine close Grain, ponderous, and of a yellow Colour; and the Bark of a reddish Grey. The main Branches are many, shooting out into a great Number of lesser ones: These are beautifully decorated with a great many winged Leaves. The Edges of these are regularly indented; and between each Segment the Leaf is generally waved, or labiated. Its Length is about two, and its Breadth about one Inch. The whole Tree, particularly when young, is guarded with short Prickles. The Flowers are succeeded by a Group of black shining flat Seeds, inclos'd in small *Capsulae*: These are very small, and of a shining Black, affording by Expression a great Quantity of Oil.

WILD HEMP.

THERE are two Sorts of this Plant, the White and Red: The latter never grows above two Feet high: The other, which is most useful, to above five Feet. The outward Coat of this, when ripe, affords

U u

numerous

numerous strong Filaments, somewhat coarser than what is peeled off from our *English* Hemp-plant: This serves to make Ropes, and such Uses. The Flowers are yellow, succeeded by small *Capsulae*, inclosing a great Number of small black Seeds. The Stalks and Leaves are thickly covered with stiff Hairs, sharp even to a Prickliness. The Leaf is bluntly serrated, and high-rib'd; in Length about two Inches, and in Breadth about an Inch and an half.

The BARBADOS PINK.

THIS is a very slender, bushy, creeping Vine, full of small Side-branches, cloathed with numerous very narrow grassy Leaves, generally set on alternately. The Flowers, which are tubular and monopetalous, are of a deep Scarlet. Their *Oræ* are divided into five Segments, the intermediate Spaces forming as many sharp-pointed Angles. The Inside of the tubular Part of the Flower appears whitish. From this Part rise several *Stamina*, tipped with whitish *Apices*. The Flowers are succeeded by small *Capsulae*, each containing a blackish Seed.

The HOP-SHRUB; *Lat. Melissa altissima globularia.*

THIS Shrub grows to be about five Feet high. The Leaves are smooth, and round-pointed, and of about three Inches long, and above one broad. These are set on the Branches in an alternate Order. The Flowers, which stand on long ligneous Pedicles, are each succeeded by very thin brownish *Capsulae*, resembling at a Distance Hops, and of a triangular Shape. This is blown out like a Bladder between each Angle, as well as every Angle terminating in a thin Border, or *Ala*.

MONKEY-VINE.

THIS is a long creeping Vine, of a dark-reddish Colour, and hairy. The Leaves are of an Heart-fashion, but somewhat auriculated near the Stalk. From the Bottom of the Leaves rise many long tubular white Flowers, whose *Oræ* are much expanded, and ting'd with Purple. From the Centre of the Flower rise several white *Stamina*, tipp'd with long white *Apices*. The Flowers are succeeded by a small round whitish *Capsula*, each inclosing six black angular Seeds, not much larger nor unlike Onion-seeds.

PLANTAIN-SHOT; *Lat. Cannacorus.*

THIS Plant grows generally in shady Places, and often to five Feet high. Its main Stalk is tubular, cloathed at different Distances with very smooth green Leaves, in Make and Substance very much resembling a Plantain-Leaf. These are about nine Inches long, and five broad. The Flowers

Flowers stand upon strong Footstalks, each having at first the Appearance of a scarlet Pod of an Inch and an half long: When this opens, it discovers three scarlet spoon-like Leaves. The Inside of one of these, when it deflects back, appears stained with Yellow and Red. From the Centre of the Leaves rises a reddish flat Pointal, incircled by another reddish Leaf, spotted with Yellow; to whose Edge, near the Top, sticks a long whitish *Apex*. The Flowers are succeeded by small *Capsulae*, each inclosing a round black hard Seed, as big as Swan-shot: From these, and the Make of its Leaves, they derive the Name of Plantain-shot.

LOGWOOD; *Lat. Campechiana.*

WHAT is called here the Logwood-tree hath a dark-coloured Bark, the Branches spreading open and wide: These are here-and-there guarded with Prickles. The Leaves are many, and very small.

WILD CLARY; *Lat. Heliotropium Americanum.*

THIS Plant grows to about eighteen Inches high; the Stalk green and hairy. The Leaves are set on alternately, surrounding the Stalk: These are of a middle Size, rough and crumpled, having their Edges much sinuated. From the Top rises a long gramineous Spike, studded with very small monopetalous whitish Flowers: These are succeeded by many small Seeds.

HOP-WEED.

THERE are two Species of this Plant, distinguished by the Name of White, and Red: The Red grows to about eighteen Inches high. The Leaves are rough, and about two Inches long, and above an Inch broad; their Edges being irregularly serrated. From the Bosom of the Leaves rise many Footstalks, thick-set with blue tubular Flowers, succeeded by small Seeds. A Decoction of this Plant is made use of, as a gentle Gargle, to cure sore Mouths.

MUSKETO-BUSH, or the WHITE HOP-WEED.

THIS derives its Name from its either real or pretended Service in driving away, by its Smell, Musketoes from Bed-chambers, or elsewhere, by having a Bush or Bough of it hanging in the Room. Its Roots are many; and the Stalk is four-square, and every Square channelled. It grows in rich Land, to often above four Feet high. This is surrounded by two-inch long sharp-pointed Leaves, whose Edges are irregularly serrated. The Top of the Stalk supports a blunt-pointed conic plushy Tuft, discovering several small tubular blue Flowers, succeeded by many small Seeds.

The WILD PENY-ROYAL.

THIS is of two Sorts, the Red, and the White, distinguished by the Colour of the Stalks. It is, in general, a low groveling Plant, jointed at every Inch and an half Distance: From these Joints issue a Pair of winged Leaves. From the Bosom of the Leaves rise several small Tufts of whitish stameneous Flowers, succeeded by a Pair of winged Leaves, extending each side the Stalk: These are somewhat sharp-pointed, of about an Inch long, and their Edges somewhat sinuated. From the middle of these Bunches of Flowers rise several lesser Leaves. The *Capsulae* that succeed the Flowers, produce small Seeds.

The WORM-SEED WEED.

THIS, it is said, very much resembles the true *Semen Santonicum*, which is exported to *England* from *Alexandria*: It is here to be found in great Plenty, upon the sandy Intrenchments near *Bridge-Town*.

CATERPILLERS. *Lat. Blitum Brasilianum.*

OF these there are two Species, the White, and the Red, both eatable, when boiled as Spinage; and they are, in my Opinion, very little inferior to the latter in their agreeable Taste, and their wholesome Qualities. The red Sort grows often to above two Feet high, especially if cultivated in Gardens. Its Roots are many, white, and stringy. The main Stalk, as well as the lesser side ones, are reddish, thick, and succulent: Even these, especially the lesser ones, when boiled, are very delicious. The Leaves are somewhat sharp-pointed, and of a pale Green, of about two Inches long, and one and a quarter broad. The several Stalks end in long Spikes: These are covered with small farinaceous green Seeds. It grows to Perfection chiefly in the Months of *July* and *August*; though it may be raised at any time of the Year, if the Season proves wet, or if they are watered. There is a third wild Sort, called the prickly Caterpillar.

BLOODWORTH.

THIS is a bulbous Plant, its Roots much resembling that of an Onion, consisting of several Coats or *Laminae*. It divides near the Ground into several long green Leaves. These are kept very upright by many longitudinal stiff Ribs. Among the Leaves rises a slender Stalk, which, near the Summit, bears a small tubular white Flower, which is succeeded by a small conic *Capsula*, containing several small Seeds. The Root of this Plant, pounded, is an excellent Antidote against Poison.

The WILD-MARIGOLD; Lat. Asteriscus frutescens.

THIS grows to about two Feet high, the main Stalk is square, and the Leaves broad, and rough; the Top of the Stalks support yellow Flowers like those of Marigold; the Petals are succeeded by a hard Button like *Capsula*, which incloses several flat small Seeds.

POND-WEED.

THIS Plant grows best in wet moist Land, where it often rises three Feet high; its Roots are many and fibrous; the main Stem and Branches are of a dark Green, and hairy, clothed with Leaves four Inches long, and one broad; these are likewise high-ribbed, and have their Edges finely denticulated. From the Bosom of the Leaves rise many long Spikes thickly covered on the upper Side with very small, white, pentapetalous Flowers, and succeeded by several minute *Capsulae*, inclosed in a green *Calyx*; the former are succeeded by several small black Seeds.

The HOG-SLIP.

THIS is a trailing herbaceous Vine, clothed with sharp-pointed Leaves; from the Bosom of the Leaves rise several two-inch Footstalks, supporting an umbilical Group of monopetalous yellow Flowers, whose Edges are slightly segmented. From the Centre of the Flower rise several broad short *Stamina*, surrounding a Pistil tipped with bluish *Apices*; these are succeeded by several *Capsulae*, inclosing, when ripe, several black Seeds. The Vine is of the herbaceous Kind, and is much covered by Hogs. From thence it derives this Name.

The BROOM-WEED.

THE Species of this Plant is divided into three Sorts, the White, the Red, and the large crumple-leaved Broom-weed; a Decoction of each Kind proves to be a strong Diuretic; the Leaf of the white sort exactly resembles that of the Green Pea.

Tobacco; Lat. Nicotiana.

THIS Plant hath been so often and so well described, that I need only observe, that it is here planted but very sparingly, and that chiefly by the Slaves, and the poorer Sort of White Inhabitants, but none for Exportation. It is very liable to be destroyed at the Roots by a Grub, or large Worm, called by the common People *Kirifonia*; the Leaves are likewise often destroyed by a small green Worm of the *Bruca* Kind.

The THISTLE, or RABBIT-WEED.

THIS hath its prickly Leaves in common with most other Thistles. From the Centre of these Leaves rises a green Spire, whose Extremity supports a Flower something like a Marigold, whose whitish Petals surround a yellow Thrum.

TUBEROSE ; *Lat. Hyacinthus Indicus Tuberofus.*

THIS is so well known here, and in *England*, that it would be Loss of Time to afford it a particular Description.

The WILD-SLIP.

THIS Vine is generally supported by the neighbouring low Shrubs; its Leaves are of a middle Size, and of a slender Texture, and are set on alternately; from among these rise on short Footstalks several Bell-fashion Flowers, of a pale White, on the Outside and the Inside, beautifully stained with a fine purple Colour.

BACHELOR BUTTON, or EVERLASTING ; *Lat. Amaranthoides Lichnidis.*

THIS Plant hath many white Roots, the Stalk succulent, large and jointed, of a fine deep scarlet Colour; from each Joint rise two opposite Footstalks, of about an Inch long, somewhat hairy like the main Stalk: These support Leaves of four Inches long, and an Inch and an half broad, round-pointed and smooth edged; the Inside of the middle Rib somewhat reddish; the Flower somewhat resembles that of Clover.

The FIRE-BURN BUSH.

THIS is a scandent Shrub, having a middle-sized sharp-pointed Leaf, bluntly jagged about the Edges; the Middle, as well as the transverse Ribs, are prominent, and very neatly disposed: The Seed-vessels are of a triangular Shape, and are set, many in Number, round long slender Stalks, rising from the Bosom of the Leaves; the Juice of these boiled, and brought to a Consistency with Hog's Lard, and other Ingredients, are said to be of great Service to cure a Fire-burn.

The DIALTHEA ; *Lat. Abutilon Indicum.*

THE Roots of this Plant are few, penetrating not deep into the Ground; the Stalk, which grows to three Feet high, is woody and brittle, dividing often into many Branches: The Bark of a full-grown Plant is of a reddish Brown, the Leaves, which are about two Inches long, one broad,

and blunt pointed, are soft, and downy, and of a hoary Green, having their Edges irregularly serrated; their middle Ribs and transverse ones are strong and prominent. They are set on the Stalk alternately, and from the setting on of these issues a Group of very small, fistular, one-leaved, yellow Flowers, whose Edges are divided into five Segments; these are succeeded by small black Seeds in form of short blunt Cones, every *Capsula* having one.

A Cataplasm of the pounded Leaves of this Plant is looked upon as an excellent Vulnerary.

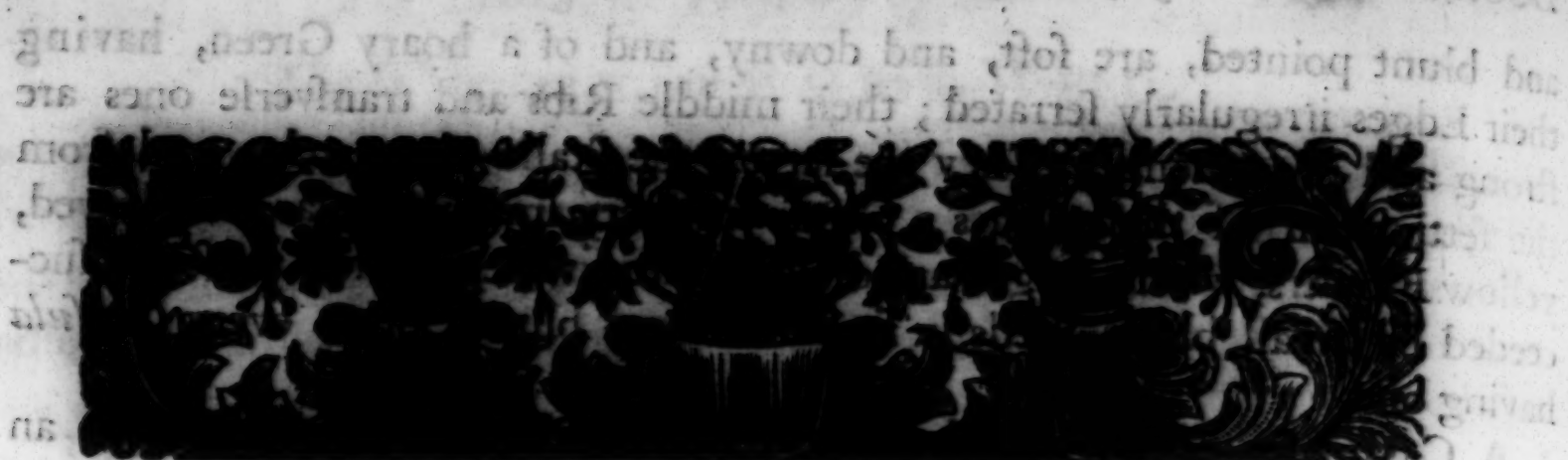
It grows generally in dry Places.



THE BEARDED FIG

TREES,

THE BEARDED FIG is a small tree, in its disposition of the tree, and its many, that it would be called to particular notice; at least, it would be an unusual task to one who writes they had left the Room for Correction. The Root of it is many and large; The Body of the tree, when old, is rather a Composition of many joined irregularly together, than one undivided trunk. This is occasioned by the manner that this tree is naturally propagated; for its branches, at unequal Distances, several take of many, its branches, each in substance and Make about as thick as the Pale-ling of a Willow. These grow always downwards, perpendicular to the Earth, and when they are some feet in Length, the Part next the Branch consolidates into firm Wood, whilst the lower Part hangs weavily downwards in its many loose twisted Shreds or Filaments; but when these grow to reach the Ground, they take Root, unite into firm Wood as the upper Part; and in a short time grow to a considerable Bulk, affording great Increase of nourishment to its once Parent-Branch; by which means this grows large, and produces other progressive, lateral, as well as many upright branches, in like manner, especially the progressive branches, by their



Of TREES, SHRUBS, and PLANTS,

OF THE

Pruniferous K I N D.

BOOK VII.

The BEARDED FIG-TREE, *Ficus Bengaliensis*.

TH E Mistakes of many Authors, in their Description of this Tree, are so many, that it would be endless to particularize them; at least, it would be an ungrateful Task to one who wishes they had left no Room for Correction. The Roots of it are many and large: The Body of the Tree, when old, is rather a Composition of many joined irregularly together, than one undivided Trunk. This is occasioned by the surprising Manner that this Tree is naturally propagated; for from its Branches issue, at unequal Distances, several Tufts of stringy Filaments, each in Substance and Make about as thick as the Base-string of a Violin. These grow always downwards, perpendicular to the Earth, and when they are some Feet in Length, the Part next the Branch consolidates into firm Wood, whilst the lower Parts hang wavingsly downwards in so many loose-twisted Shreds or Filaments; but when these grow to reach the Ground, they take Root, unite into firm Wood as the upper Part; and in a short time grow to a considerable Bulk, affording great Increase of Nourishment to its once Parent-Branch; by which means this grows large, and produces other progressive, lateral, as well as many upright Branches; these, in like manner, especially, the progressive Branches, by their

their descending Filaments produce new Trunks, and so on successively.

When these Filaments grow from Branches near to, and take Root within a small Distance from the original Parent Tree, many of them by their quick Growth are joined sometimes partially, sometimes totally to it, and so in time form one irregular enormous Trunk.

I am of Opinion, that if one of these Trees was carefully and properly cultivated by Art, and Cattle of all kind kept from browsing upon it; if the bearded Filaments were suffered to insinuate themselves, especially those from near the Extremities of its longest lowermost Branches, or were they guided to take Root in the Earth, one single Tree might be brought to make a considerable Grove. Its Leaves are of a smooth shining Green, in length about five Inches, and above two broad, smooth-edged, and sharp-pointed. The Flowers, as in others of the like Kind, are contained in the Embryo Figs; these latter stand upon short Footstalks, and are about the Bigness of small Cherries, the inside full of small *Acini* resembling eatable Figs; which are Food only for Birds, especially Pivets, which come in great Number to feed upon them when ripe. The tender Buds and Leaves of this Tree afford, when bruised, a milky Juice very much resembling in Colour and Consistence that which issues from the Manchaneel Tree, but differing in its Quality, the former being, as it is said, a sovereign Remedy against the Poison of the latter.

The most remarkable of these Trees for Bigness grows near *Codrington* College. This, about six Feet from the Ground, divides into five Branches, each equal to a large Tree, some of them girding round about eight Feet. The most lofty of these Branches is by moderate Computation above forty Feet high. But as there is nothing that can be called great or little but by Comparison; let us examine, as far as any credible History hath informed us, whether any Part of the World affords of this, or any other kind of Tree, a larger. What bid fairest for Superiority are the Cedars of *Libanus*, which they will always deserve in regard to the Goodness and Solidity of their Timber, but not in Bulk; for, according to the Reverend Mr. *Maundrel's* Account, the utmost Extent of the Branches of the largest Cedar upon Mount *Libanus*, from one Side of the Tree to the other, did not spread above a hundred and eleven Feet; whereas the Branches of this reaches above an hundred and twenty-seven; the Circumference of the Body of the former was but twelve Yards, of this eighteen; therefore we may pronounce it to be the largest Tree that hath been taken notice of in any well attested History. The next to this in Bigness in this Island, is in *St. James's* Church-Yard, which spreads a Shade (very near circular) of eighty-five Feet in Diameter; and its Height, by Computation, is at least seventy Feet. The great Mr. *Milton* was of Opinion, that this was the Tree with whose Leaves our first Parents made to themselves Aprons: for in describing their Fall he says;

— And both together went
 Into the thickest Wood: There soon they chose
 The Fig-tree, not that Kind for Fruit renown'd;
 But such as at this Day to *Indians* known
 In *Malabar* or *Decan*, spreads her Arms
 Branching so broad and long, that in the Ground
 The bearded Twigs take Root, and Daughters grow
 About the Mother Tree; a pillar'd Shade
 High over-arch'd, and echoing Walks between:
 There oft the *Indian* Herdsman, shunning Heat,
 Shelters in cool, and tends his pasturing Herds,
 At *Loopholes* cut through thickest Shade. These Leaves
 They gather'd broad as *Amazonian* Targe;
 And, with what Skill they had, together sew'd
 To gird their Waist.

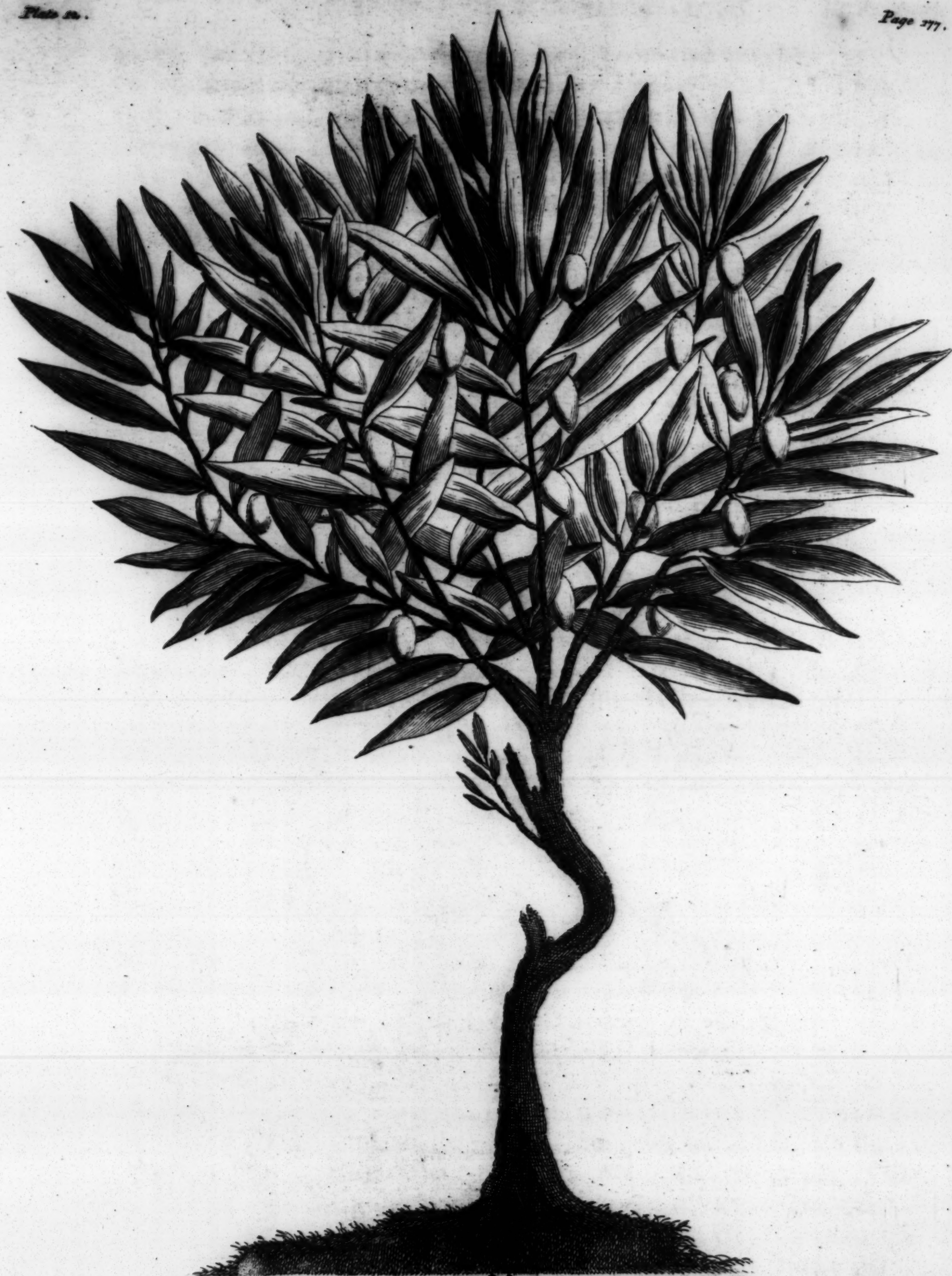
However noble this poetical Description is; yet, as to the Matter of Fact, it wants even Probability to countenance it; for the Leaves of this Tree are so far from being of the Bigness of an *Amazonian* Target, that they seldom or never exceed five Inches long, and not quite three broad; therefore we must look for another of the Fig-Tree kind, that better answers the Character given of this Tree by *Moses*: And as the Fruit of the Banana-tree is often by the most antient Authors called a Fig, I may, I hope, without Presumption add my own to the already numberless Conjectures of others, and look upon the Fig-tree in Paradise to be no other than the Banana-tree; for when *Pliny* describes the *Asian* Fig-tree, he says its Leaf is *maximum umbrosissimumque*; and as the Leaves of these are three Feet long, and about two broad, they may be deemed more proper than any for a Covering; especially since they might be easily joined together, with the numerous thread-like Filaments, which may without Labour be peeled from the Body of this Tree. These Fig-trees grow in the *East* as well as the *West-Indies*. *Quintus Curtius*, in his Account of *Alexander's* Expedition to the *Indies*, excellently describes it. Had both the *Indies* been so well known some Centuries ago as they are now, that Author would not have been (at least in this Instance) thought fabulous. His Words are these:

Sylvæ erant prope immensum spatium diffusæ, procerisque & in eximiam altitudinem editis arboribus umbrosæ. Plerique rami instar ingentium stipitum flexi in humum, rursus, quæ se curvaverant, erigebantur, adeo ut species esset non rami resurgentis, sed arboris ex sua radice generatæ.

Quint. Curt. Lib. IX.

The STOPPER-BERRY Tree; Lat. MALPIGHIA.

THIS grows to be a considerable large Tree. Its Bark is of a whitish-red, and scaly, often dropping off in Flakes; the upper Branches are thickly cloathed with deep-green smooth shining Leaves, of about three Inches



To the most Rev.^d
THOMAS Lord



Father in GOD,
Bishop of LONDON.

Bontia Sapharides?

Inches long, and near two broad; these are generally set on in Pairs. From the Bosoms of the Leaves rise a great many Pedicles supporting small white Flowers; these are succeeded by Berries black when ripe; of about the Bigness of a black Cherry, or rather larger and flatter; the Pulp is of a sweetish Taste; this surrounds a greenish soft Kernel; the Fruit is eaten by Men as well as by several Kinds of Birds.

The BULLY-BERRY Tree.

THIS is a very durable Timber-tree, growing so large as often to exceed seventy Feet in Height; the Bark is of a rough rugose Texture; the Leaves are smooth, thick, and of a shining-dark Green. The Fruit, which succeeds a small white Flower, is round, and of a golden Colour, having a small *Corona* at the Top: The Inside is of a milky, clammy Substance, and very sweet. This thick Pulp surrounds two dark, reddish, flat Stones, very much resembling the Seed of a Sappadillo; the greatest Number of these Trees are in *Scotland*, at the Estate of *Thomas Alleyne, Esq;*

The East-India MANGO Tree.

THIS Tree, or its Seed, was lately brought from the *Rio Janiero*, and grows only at the *Guiney* Plantation belonging to *Edward Lascelles, Esq;* Its present Height is about twelve Feet; its Leaves are narrow and sharp-pointed, being at least seven Inches long, and one and an half broad: The middle Rib strong and prominent. These are set on the Branches in an alternate Order. Tho' this is called the *Mango* Tree, yet the Leaves do not answer the Description given by others of the real *East-India Mango* Tree.

The OLIVE-TREE.

I Have seen several of what are here called the true Olive-Trees; but as they never bore any Fruit, we have only a traditional Certainty of their being the real Trees, which, in other Parts, bear Olives; however, I shall insert its Character. The Trunk is considerably large, cloathed with a whitish-grey Bark; the Height of the whole Tree is often above twenty-five Feet; its Leaves, which are many, are set on in an alternate Order. These are about two Inches long, half an Inch broad, and sharp-pointed; the upper Side green, and the under covered with a hoary Mealiness.

The Wild OLIVE-TREE.

THIS grows to the Height of a common Willow. The Bark of the main Trunk is much sulcated, and of a dark Colour; its Top, by its many small Branches, and numerous sharp-pointed Leaves, is very bushy; these Leaves are generally four Inches long, and one broad, set on

on the Branches in an alternate Order. The first Appearance of the Flower is a Tube of a brownish-white Colour, about the Thickness of a Quill, and in Length three-quarters of an Inch; this, near the Top, first bulges out, and then splits into two Parts; the upper, which I call the Crest, being excavated Spoon-like; the under Lip deflects very much back, ending in three distinct Divisions, each Point curling inward; the middlemost having from the Socket of the Flower, to its Extremity, a narrow List of fine purple Fur, or soft *Villi*. As the Flower comes to its Perfection, the Crest, or the upper Part, deflects back from the intermediate Space; between the upper and the lower Lip rise four *Stamina*, tipp'd with *Apices*, surrounding a naked Pistil, which, when the Flower drops, becomes the Rudiment of the Fruit, which is a small Olive, Yellow when ripe. These Trees are valued for their quick Growth, and good Shelter, and they are chiefly planted near the Sea-side, to shelter the neighbouring Fields of Corn and Cotton from being blasted by the salt Spry of the Sea, which too often, after all Precaution, is very destructive to those Plantations that adjoin to the Sea to the East and North-East of the Island. This is delineated in Plate XII.

The FUSTIC-TREE; Lat. Morus.

THERE are two Species of Fustic-Trees, the Green and the Yellow; the former is very scarce in this Island; the latter is distinguished into the Male and Female, the Male bearing a two-inch long Spike, or Katkin; the Female bears on the under Part of the Leaves, on the middle Rib, several squammos sweetish Berries, much resembling Mulberries; these are eaten by Birds whilst upon the Tree, and much coveted by Dogs when ripe, and fallen off. The Heart of this Tree is very yellow, and much made use of by the Dyers; it is likewise very solid and durable Timber, which makes it useful to make Cart wheels, &c. These Trees grow best in Gullies, and such Places as are shaded from the Wind.

The Gully PLUM-TREE; Lat. Mombin.

THIS Tree, especially if shaded from the Wind, grows considerably large, both in Bulk and Height; the Bark upon the Trunk is of a very dark Grey, fulcous, and very rough; its Branches are many, and generally crooked. These are cloathed with unequally pennated Leaves. The Lobes are about three Inches long, and somewhat above an Inch in Breadth; the Leaf consisting generally of four Pair of Lobes, with an odd one at the End. The upper Twigs support pyramidal Clusters of small granulated herbaceous Flowers, which are followed by Plums of oblong Shape, yellow when ripe, and somewhat bigger than large Nutmegs; these in Bunches hang downwards, supported by two-inch-long Footstalks. Their pulpy Part is of an agreeable Taste; this is not



To the R^t Hon^{ble} George Littleton, Esq^r
 one of his Majesty's Commissioners for executing the
 Office of Lord High Treasurer:
 This Plate is humbly inscrib'd &c.

not above one seventh of an Inch thick, covering a rough, fulcous, stony Kernel. This is delineated in Plate XIII.

The WHITE PLUM-TREE.

THIS is a middle-sized Tree, the Body of it cover'd with a whitish Bark; the Branches are cloath'd with Leaves of about four Inches long, and two broad, ending in a round Point; the slender top Branches sustain Groups of white small Flowers, which are succeeded by a great Number of small Plums, green even when ripe; these by the Heat of the Sun open into three thick Partitions, emitting a great many scarlet stringy Seeds.

The Jamaica PLUM-TREE.

THIS grows to a considerable Bigness; the Branches are cloathed with pennated Leaves; the Flowers are succeeded by oval Plums, somewhat depressed at both Ends, having their Surface here-and-there indented. These are of a purple Colour when ripe, and of a sharp agreeable Taste.

The DAMASCEN, or the CALLIMATO-TREE; Lat. Icaco.

THIS Tree grows to about twenty Feet high. The Leaves are long, sharp-pointed, and smooth-edged; very green on the upper, and pale on the under-side; they are set on the Branches alternately. It bears about *April* a great many Flowers, very much resembling those of a Sugar-apple; these are succeeded by black, longish, very clammy Plums, having one, sometimes two Stones or Kernels in them, the pulpy Part being very sweet, and agreeable. The great Turtle-Doves, Pivets, and Thrushes, feed greedily upon them.

The CHIGERY-GRAPE-TREE.

THIS is a middle-sized Tree, having strong numerous Roots; the Bark of the Trunk is of a dark Grey; the Branches are thickly covered with Leaves; these are about five Inches in Length, and two in Breadth. The Flowers, which are small, five-leaved, and of a brownish Colour, in great Number surround several russet strong Spikes, of about two Inches long; these Flowers are succeeded by Berries somewhat smaller than white Currans, each composed of several thick juicy *Laminae*, inclosing a blackish sharp-pointed Stone or Kernel; these are red when half-ripe, and white when full-ripe: They have an acid, sweet, agreeable Taste, like white Currans; but if eaten to Excess, they cause a tingling Itching in the Skin. They are generally ripe in *August* and *September*.

The BAY-GRAPE-TREE.

THE Body of this Tree is considerably large, though seldom growing to any great Height, unless shelter'd from the Wind; the Branches are many, but crooked and straggling: The Bark is of a whitish Grey; from the Extremities of the Branches hang pendulous Spikes, thickly covered with very small Blossoms, which are succeeded by a great Number of Grapes in Clusters: These are round, and smaller than the least red Cherry, and of a russet Purple when ripe; they have an agreeable Mixture in their Taste of both sweet and poignant Acid; their Pulp, which is but small in Proportion to their Bigness, surrounds a Stone or Kernel; these, if bruised and steeped in Wine, are looked upon to be a good Restrictant. The Tree grows best in a loose sandy Soil; their Leaves are very broad and sleek, closely embracing the Stalks, and neatly strewed with purple or red Veins; and even the whole Leaf, whilst young, is red. The Grapes steeped in Water, and worked up with Sugar, make a very agreeable Wine.

The FAT PORK-TREE.

THIS chiefly grows near the Sea-side, in the Parishes of *St. Joseph* and *St. Andrew*. The Fruit is distinguished into the white and red Sort. The Trees bearing each differ very little, if any thing, in their Texture, Leaves, or Flowers; the main Body of the largest exceeds not five or six Inches in Circumference; the Leaves are of a middle Size, round-pointed, and set on the Branches alternately; the Flowers are white, and very small; the Petals are surrounded with a green stiff *Calyx*: These are succeeded by Plums called here *Fat Pork*. The outside Skin of one Sort is, when ripe, of a fine scarlet Colour, faintly clouded over with a purplish glaucous Measiness, like that which covers Plums in *England*. The white Sort differs only in Colour; for the pulpy Part of each cuts stringy, or rather woolly, and is of a white Colour, not ill resembling, though less firm than, the Fat of Pork whilst warm. This Pulp hath a sweetish Taste, but to a great many disagreeable; this eatable Part covers a pretty large Stone, which incloses a white Kernel, no-way disagreeable to the Taste; the whole is full as large as our common black Plums in *England*.

The BLACK WOOD.

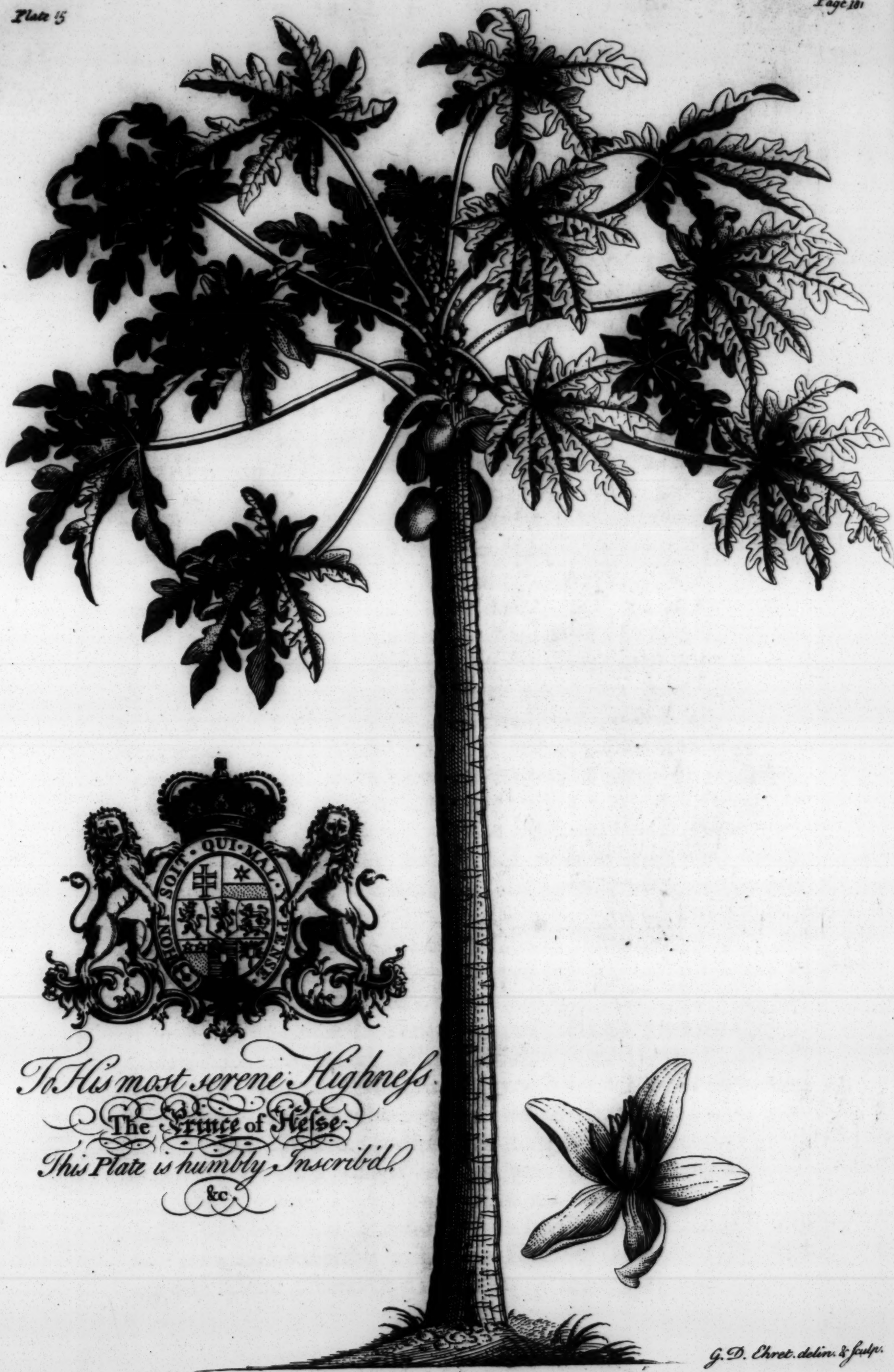
THIS grows to be a large Tree, of an hard solid Texture; it derives its Name from the blackish Colour of its Bark and Leaves; it sheds yearly its Bark, which is very bitter; its Flowers are succeeded by small Plums; the pulpy Part surrounding a Stone or Kernel, or sometimes two.



To His most serene Highness
The Duke of Orleans
This Plate is humbly Inscrib'd.
&c.

J. D. Phret delin. & sculp.

Carica Papaya. L.



To His most serene Highness
The Prince of Hesse
This Plate is humbly Inscrib'd.
&c.

Carica Papaya. L.

The MALE POPAW TREE; Papaya.*Carica Papaya*

THIS Tree is generally of an undivided Trunk, and distinguished into the Male and Female; as well as the Fruit into the long *Mango Popo*, and the round Sort.

It's Roots are many and strong, penetrating not deep into the Earth, but extending several Yards in a circular Compass. The Bark, which is of a whitish Colour, is marked with the *Vestigia* of the fallen off large Footstalks of the Leaves. The Body of the Tree grows tapering to the Top; it is often at the Root of about a Foot Diameter, and generally from fifteen to twenty Feet high. The most substantial Part of the Tree is a thick reticulated Web composed of several complicated Divisions, something like the *Tunica reticularis* in the Skins of Animals; it is in this that the Strength of it consists. The Inside of all the young, especially towards the Top, as well as most old Trees, are hollow: by this we hieroglyphically represent a Person of no Sincerity, and from hence in these Parts comes that Proverb to that Purpose, *As hollow as a Popo*.

Within three Feet to the Top, the Leaves begin to surround the Tree in a circular and regular Manner, and consequently very beautiful. These Leaves, especially the lowermost, which are the largest, being often above a Foot and an half long, are neatly divided into eight or nine large Sections, each again subdivided into lesser ones, and ending in a Point; the middle Ribs are strong and prominent; the whole Leaf appears very beautiful, being on the upper Side of a deep Green, and beneath covered with a very visible, yet very short hoary Down. The largest Leaves, which are lowermost, stand upon green hollow Footstalks, often two Feet long; however these, as well as the Leaves, gradually grow less toward the Extremity of the Tree. The Stalks, when bruised, yield a disagreeable Hemlock-like Smell.

The Male Tree bears several small pentapetalous white Flowers upon pendulous Stalks of near a Foot and an half long, but was never here known to produce Fruit. This Tree is delineated in Plate XIV.

The Female bears somewhat similar, but larger Flowers, of a yellowish Colour, growing on very short Footstalks, arising from, and surrounding the Tree among the lower Leaves chiefly; these in still Evenings and Mornings afford a very fragrant and grateful Smell. The Female Flowers and tender Buds of these are preserved into Sweetmeats, and the long *Mango Popo* into Pickles, the latter being very little inferior to an *East India Mango*. Both these Fruits, especially the round Sort, are likewise, when near ripe, boiled and eaten with any kind of Flesh-meat, and esteemed wholesome, if they are cleansed of the milky corrosive Juice they contain, and eaten but seldom. This Juice is of so penetrating a Nature, that if this unripe

ripe Fruit, when unpeeled, is boiled with the toughest old salt Meat, it will soon make it soft and tender; and if Hogs are for any considerable Time fed with it, especially raw, it is said that it will wear off all the mucous slimy Matter, which covers the Inside of the Guts, and would in time, if not prevented by a Change of Food, intirely lacerate them.

I know of no physical Virtue in any Part of this Tree, unless that the milky Juice of the *Popo* is sometimes made use of to cure Ring-worms, and such cutaneous Eruptions.

It grows best in shady Places.

This Tree is delineated in Plate XV.

The PLANTAIN-TREE.

IT is the Opinion of many Writers, that this Tree was formerly peculiar to *Ethiopia* only, though now very common in all the hot Parts of *Asia*, *Africa*, and *America*; especially in *Guiney*, and the *West Indies*. Its Height, great Bulk, and large Leaves, claim a Place among Trees; but its soft bulbous Roots, the pulpy Texture of the Trunk, which is so herbaceous, that it is often sliced and given by way of Fodder to Cattle, seem to partake of a liliaceous Plant, more than a Tree: but as it hath generally been classed among the latter, I shall treat of it in the same Light. Its Roots are numerous, white, and spongy; the Trunk near the Earth is about thirty Inches in Circumference, round, tapering, and undivided, till about nine or ten Feet high, at which Height it puts forth several large green Leaves in an alternate Order: These are often five Feet in Length, and near two and an half in Breadth, of a delightful shining Sea-green Colour, and of a long oval Shape; these stand upon long tapering Footstalks, the middle Rib in each Leaf is very prominent, and deeply channelled on the upper Side. This serves as a Gutter to convey the Water that falls upon the Leaf, to the main Trunk, where it is soon absorbed by so soft and porous a Body; for the Trunk of the Tree is composed of several *Lamine* upon *Lamine* of large longitudinal Veins, or Vessels horizontally crossed at about one tenth of an Inch Distance, with very thin membranaceous Filaments. These last prevent both the copious Juices from the Roots, or the Dew and Rain descending from the Leaves, to penetrate through the other perpendicular Vessels, till each Part is saturated with its proper nutritious Juice. From the quick Growth, and great Bulk, of such succulent Plants, spongy Shrubs, and Trees which have their Vessels so much distended, we may perhaps account for the far slower Growth of more durable Timber, both here and elsewhere: For the Closeness of the Grain of the latter having their Vessels very fine in close Contact, the annual *Lamine* of these, when succeeded by exterior new ones, close and consolidate together, and so add to the Bulk of the Tree: Yet such an Addition will be no more, when compared in Quantity to the gross *Lamine* of succulent Plants, spongy Shrubs or Trees, than so many Layers of Muslin compared in

in Bulk to an equal Number of coarse Bays. But to return to my Subject: From the Top of this Tree (issuing from among the upper Leaves) at about ten Months Growth, rises a tough ligneous Stack, about three Feet long, bending downwards, and bearing on its Extremity a conic purple *Spatha*. "The Flowers (which surround this in three or four Rows) are monopetalous, irregular, incomplete, and Hermaphrodite, composed of a Tube which fills the Ovary, and a Pavilion divided into four Lobes, and forming a kind of a Mouth. The Ovary, which adheres strongly to the Tube, is triangular, and crowned with five Chives, which grow from the Side of the Flower. The Style, which is also terminated by a little Head, afterwards becomes a soft somewhat angular Fruit, whose outward husky Tegument is very smooth, and yellow when ripe." This is from five to nine Inches long, and near an Inch Diameter, growing smaller, and by Degrees a little crooked, at each End: The outward Coat or Rind easily peels off when ripe. The inside eatable Part is of a gold Colour, and of a sweetish Taste. The whole Bunch, which generally contains some Scores of these Plantains, often weighs forty, fifty, or sixty Pounds Weight. The most common Method of using this Fruit, when designed to supply the Place of Bread, is, to take them when green, though-full grown, and bake them in the Embers, or boil them.

In a short time after the Plantain-Tree hath borne its Bunch, it decays near the Root, and falls prostrate to the Ground, and perisheth: However, the Planter's Hope perisheth not with it; for long before the Mother Tree decays, two or three large Suckers or young Trees grow up from the Root of the old one. The largest of these, in about a Twelvemonth's Time, bears such another Bunch of Plantains as the above describ'd; and as this Tree likewise dies, after it hath produced Fruit, there spring up from the Root fresh young Shoots; so that there is an annual Succession of Trees without any Trouble to the Planter. However, it is thought the most prudent Method is to replant them once in seven or eight Years; in doing this to the greatest Advantage, the Situation must be rich, and sheltered from the Wind; and the Land intended for this Purpose must be dug in Holes two Feet deep, one and an half broad, and twelve Feet asunder: These being well manur'd, large Roots of superfluous Plantain-Trees are cut through in two or three Pieces; one of these put in every Hole, slightly covering it with Earth, in a short time springs up. Another common Way of propagating these Trees is, to dig up other young ones, which in great Number are to be found growing about the Roots of old decaying Trees, and cutting off the Top of these within three Feet to the Root, and so transplant them into Holes prepared for that Purpose. Having cut one of these young Trees horizontally in the middle, the remaining Stump vegetated so strong from the Centre, that it thrust out a small slender Shoot near a Quarter, or above * an Inch long in seven Hours time.

* However surprizing this may appear, it is not more extraordinary than the quick Growth of Asparagus in England; a far colder Climate.

The Wild PLANTAIN-TREE.

THIS hath a great Resemblance, in its Trunk and Leaves, with the Plantain-Tree already describ'd, differing chiefly, that though it blossoms, it never bears any Fruit.

The BANANA-TREE.

THIS differs in its general Make from the Plantain-Tree, only by the greater Height of its Trunk, which is likewise here-and-there spotted with Black; the Leaves, as well as the Fruit, are somewhat smaller than those of the Plantain-Tree, the Fruit being not above five Inches long, of a fine yellow Colour when ripe, and of a fragrant Smell, and sweet Taste. These are eaten raw by way of Dessert. The learned Doctor *Derham* observes, that the finest Needle, the Work of Art, appears, when viewed through a Microscope, rough and unhewn, when compared to the Sting of a Bee, or even the meanest Blade of Grass, the Work of Nature: so there is no less distinguishing Delicacy in the Taste of those large Drops of natural Honey found in the Blossoms of this Tree, when compared with what our Hive produces; the former intirely void of that Harshness in the Throat, from which the best of the latter, by its essential Salts, is not free. This was a symbolical Tree in *Egypt*; for, among other Hieroglyphics, we often find the Head of *Osiris* adorn'd with *Banana* Leaves, and the Child *Orus* sitting on her Lap. It grows best under the Shelter of a Hill, or some such shady Place. As these are justly reckon'd among the most delicious Fruits that *Arabia* produces, *Ludolphus*, in his *Ethiopic History*, conjectures that these Fruits were the Mandrakes which *Jacob's* Wives contended for. This Tree is described in Plate XVI.

The WATER LEMON-VINE.

THIS is a very large ligneous Vine, creeping, if supported by neighbouring Trees, to a very great Length. The Leaves are of a dark Green, and sharp-pointed. The Flowers very much resemble those of the *Granadilla* Vine; these are succeeded by a Fruit as big as an uncased Walnut, of an irregular roundish Shape, the Outside of a yellowish skinny Substance, the Inside much resembling that of a Gooseberry, being full of a sweet gelly-like Substance, mixed with a great many small *Acini*: This justly claims a Place among the most delicious Fruits.

The WILD WATER LEMON-VINE, or LOVE IN A MIST.

THIS is a sort of a Passion-Flower, and called by *BOERHAAVE* *Granadilla flore albo, fructu reticulato*. This is a trailing gramineous hairy Vine, provided with a great many Tendrils, or Claspers, which



To His Grace the
Duke of Chaulnes
President of the Royal Academy of Sciences
at PARIS &c.

G. D. Chet. delin. & sculp.

which twist round the neighbouring Trees or Bushes, and so supports itself from the Ground. The Leaves, which are likewise somewhat hairy, and cut into two shallow Sections, are set upon the Vine upon an Inch Footstalk, and about two Inches asunder. From the Bosoms of the Leaves rise Stalks of about an Inch long, supporting many beautiful Flowers, composed of fistulous *Radii*, round each Border, purple at the Bottom, and whitish at the Top: These are almost inlaid in an outward Covering of very thin white membranaceous Leaves, which are much crumpled and labiated bending inwardly; a double *Perianthium* divided into five deep Sections. The Ovary, which is the Rudiment of the Fruit, rises from the Bottom of the Flowers, from the middle of which Ovary come five short Chives, bending downward, and tipp'd with large oval Summits: Between this and the Top is the Fruit seen in Miniature, from whose Top come three Styles tipp'd with round Buttons. These likewise bend downwards. As the Flower decays, the *Perianthium* closes together, forming a green somewhat conic Fruit, about the Bigness of a Cherry; the outward Skin being seemingly divided, or rather mark'd with six unindented Seams. The Fruit, when ripe, is yellow on the Outside, including a great many very agreeable pulpy Seeds, and Juice, of the same Taste as the Water-lemon already described. What is most remarkable in this Fruit is, that it is intirely covered or surrounded with a bluish white reticulated Web, composed of innumerable small Strings, and soft Bristles, whose Tops are tipp'd with a glutinous Substance. Both this Web, and this clammy Matter, are designed by Nature to preserve the inclosed Fruit from being destroyed by Vermin, such as Ants and others.

PIMPLOES; *Lat. Opuntia.*

THESE are likewise called the wild prickly Pear; their Roots are many, extending several Feet round: It hath scarce the Appearance of any Stalk near the Earth. The whole Tree or Bush is composed of numerous Leaves of a round oval Shape: These are about nine or ten Inches long, about seven broad, and three-quarters of an Inch thick. The Inside of these contains a great Quantity of mucilaginous Juice; the Surfaces of them are thickly beset with Tufts of whitish Prickles, each Tuft consisting generally of four of these Prickles. The Body of this Bush, after the green outward *Lamina* is scrap'd off, is a reticulated Substance, strongly wreathed in several Folds one among another. The Flowers come out of the Sides of these Leaves, and are compos'd of a great many round-pointed Petals of a yellowish Red. The Chives are very many, tipp'd with yellowish Summits. The Pistil is red, and surrounded with these Chives. These Leaves are supported and spring from a conic green husky Pod-like scaly Substance, and are succeeded by a Fruit whose Inside is full of small black Seeds.

The COCHINEAL.

THIS hath at a Distance the Resemblance of the Pimploe; but it generally grows higher; and the Leaves are smooth, bearing many rosaceous red Flowers, which are succeeded by somewhat round scaly Fruit, whose Inside is full of small *Acini*, and purple Juice.

The PRICKLY PEAR-VINE; Lat. Cereus scandens minor.

THIS likewise is of the same Texture as the three last already described, each of them, in my Opinion, being a strange Mixture between a Plant and a Shrub. This, if supported by a Wall, will grow above fifteen Feet high, composed of several thickish Leaves of a triangular Form, almost as deeply indented between every Angle as the Blade of a three-edged Sword. These Leaves are of a strong ligneous Substance, of about two Feet long, the Extremity of one giving Birth to another. The Edges of every Angle are, at certain Distances, thickly covered with Tufts of very sharp-pointed Prickles. From these Eminences likewise proceed the Flowers: These are of the rosaceous Kind, standing upon longish green bulbous Stalks. The Petals of each Flower are sixteen in Number, two Inches long, and blunt-pointed; these are so very thin, that when laid over the smallest Print, it may be seen and read through the Leaves. These membranaceous Petals are supported by other green capsular Leaves; the Style is large and strong, surrounded by numerous white Chives, tipp'd with whitish Summits. The Fruit, when ripe, is of an oval Form, and often as large as a Turkey-egg: The outside Skin or Rind is, when full-ripe, of a dark-purple Colour, and scaly at about every Half-inch Distance, each Scale being of a triangular Shape, and sharp-pointed. The whole Rind is likewise here-and-there studded with Tufts of very small sharp Prickles; the Inside is full of purplish solid Pulp, intermixed with small whitish Specks; the whole somewhat juicy, and well tasted.

The WILD CUCUMBER-VINE; Lat. Anguria.

IT is called by Father PLUMIER, *Anguria fructu echinato eduli*. This quadrangular rough hairy Vine hath a long Tap-root, very little divided, even at its Extremity; it creeps generally upon the Ground, and by its numerous twisting Claspers takes hold on every Side of the neighbouring Bushes: Its Leaves, which stand upon two-inch long Foot-stalks, are deeply divided into three, sometimes more, round-pointed Sections; its Flower, which is yellow, is succeeded by a small Cucumber, whose Surface is covered with many soft-pointed Prickles; they are sometimes eaten, but are esteemed to be of too cold a Nature to be wholesome.

The GRANADILLA-VINE.

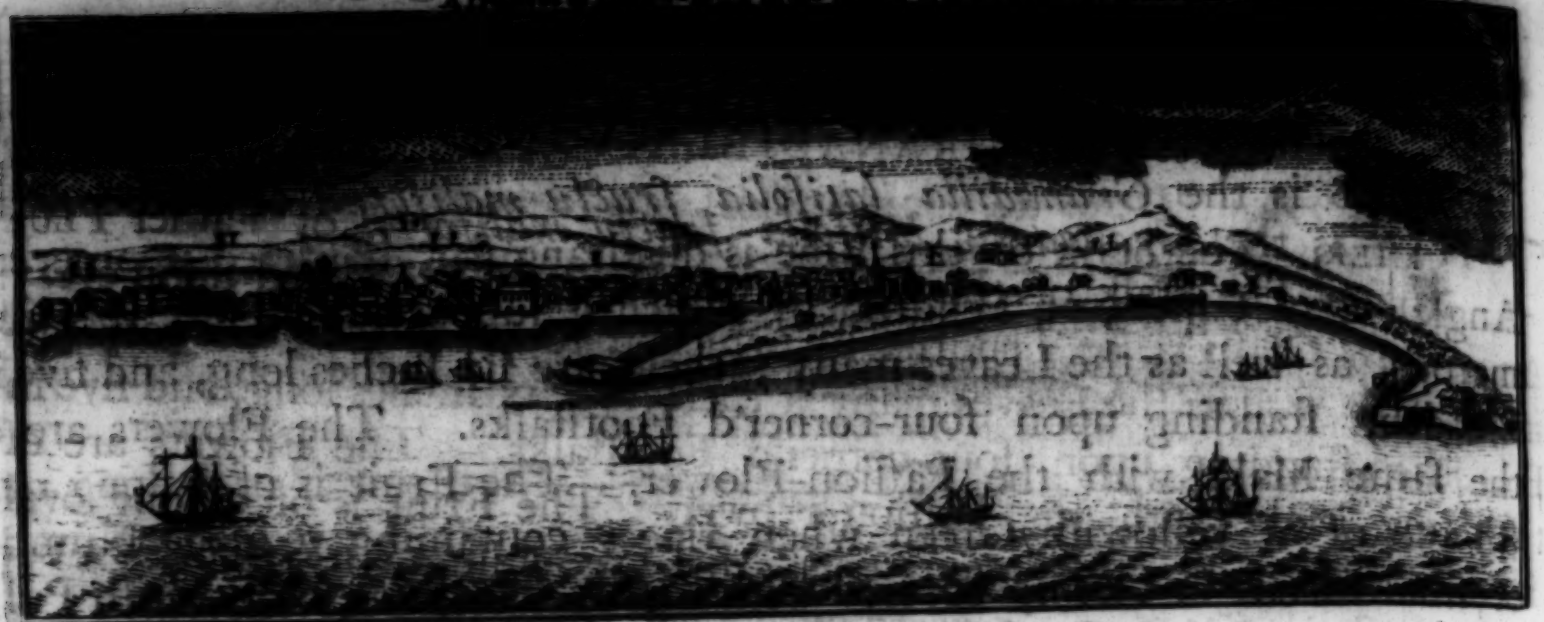
THIS is the *Granadilla latifolia fructu maliformi* of Father PLUMIER. The Stalk of this Vine is quadrangular, bordered upon every Angle: Its Claspers, or Tendrils, by which it supports itself, are very numerous, as well as the Leaves many; these are six Inches long, and five in Breadth, standing upon four-corner'd Footstalks. The Flowers are of the same Make with the Passion-Flower. The Fruit is of a long oval Shape, of a yellowish Green when ripe; containing a great Number of small Seeds or *Acini*, covered with a gelly-like Juice, or sweetish Pulp. This Vine grows best in shady Places, and must be supported with an Arbour.

The FIG-TREE.

AS neither this Tree, nor its Fruit the eatable Fig, differ from that of the same Species in *England* and elsewhere, it will be needless to give it a particular Description.

Here ends the *Pruniferous* Kind of Fruit.





OF
TREES, SHRUBS, and PLANTS,

OF THE
SILIQUESE KIND.

BOOK VIII.

BY Trees, Shrubs, and Plants, of the filiquose Kind, are to be understood all those whose Fruits are inclosed in Pods.

It is observable, that very few Trees bear Pods in cold Climates, in Comparison to the great Number which warm Countries abound with.

And, as most of the filiquose herbaceous Plants are scandent, it is remarkable, that as they are weak, and, as it were, helpless of themselves; therefore indulgent Nature hath provided them with either Tendrils or Claspers to intwine about others, and be supported by them; and often with even sharp-pointed Hooks at their Extremities to fasten upon the neighbouring Trees or Rocks: And thus, like helpless Orphans, by this fostering Assistance, they not only subsist, climb up, and flourish; but also help to adorn the Face of Nature with their varied Beauties.

It is likewise worthy our Notice to observe, that these are not only in greater Plenty, but that there is likewise a greater Variety of them, in warm Climates: And indeed they are, by their Qualities, better adapted for the



To the Right, Honourable
 Earl of Bath,
 This Plate, is humbly Inscrib'd
 &c

G. D. Ehret. delin. & sculp.

the Constitution of Persons in hot Countries; for, by the small Quantity of Oil and Salts they contain, they are less liable to produce gross Humours than animal Food.

The TAMARIND-TREES; Lat. Tamarindus.

THESE are of two Sorts; at least different in the Taste of their Fruit, the one bearing a sour Fruit, the other of a Mixture of a sweet and acid Taste.

The Trees, though they thus differ in their Fruit, are however of the same Bulk, Make, and Texture. Each having numerous large Roots, and Branches, the latter by their many Subdivisions, and being thickly cloathed with very many pennated Leaves, afford an agreeable Shade.

The Flowers are yellow, somewhat speckled with Purple; and of the papilionaceous Kind.

These are succeeded by falcated Pods, consisting of four or five Cells, each including a flattish oval Stone inclosed in a Snuff-coloured Pulp.

This Pod is of a brownish grey Colour; when ripe, easily broken, and separated from the Pulp.

This, and the inclosed Stones, are fastened together by a great many small slender Fibres from the woody Stalk, which run through the Pod.

This Pulp is preserved in Sugar, and sent to *England*, or elsewhere; and it is looked upon, taken inwardly, to be a good Cooler in Fevers.

These Trees are not peculiar to our Climates; for they thrive not only in *Egypt*, but likewise in the Land of *Palestine*, in *Arabia*, and in other Parts of *Asia*.

The TREE JESSAMIN.

THIS grows to be a considerably large straggling Tree, cloathed with many Leaves generally set in Groups on the blunt Extremities of the Branches.

The Flowers are pentapetalous, and are succeeded by long Pods.

This Tree is described in Plate XVII.

The SPANISH ASH.

THIS Tree hath an Ash-coloured Bark: the Trunk of it, in rich shady Land, grows to so great a Bulk, that the Heart alone is of a considerable Bigness.

Its Branches, which are clothed with oblong, pointed Leaves, placed in Pairs, each Leaf about three Inches long, and one broad, grow generally very upright, till near their Extremities, where they are subdivided into many lesser; and then bend wavingly downwards, clothed with many pendulous Groups of papilionaceous Flowers, of a fine violet Colour.

These

These are succeeded by broad flattish Pods; each inclosing two or three Seeds, somewhat resembling, but flatter than, a Kidney-Bean.

Each Seed hath its partitional Cell, in which, when the Seed is ripe, is always found a small Quantity of a glutinous Substance, of the Consistence of a very soft Gum.

The WHITE SPANISH ASH.

THIS differs chiefly from the *Spanish Ash*, already described, by the Colour of its Flowers; those of the former being of a beautiful Purple mixt with White, of the latter intirely white, and succeeded by a flattish small Pod, containing three flattish Seeds or Beans.

The SILK-COTTON-TREE; *Lat. Ceiba*.

THE Roots of this Tree are very numerous, jutting out above-ground like so many Buttresses, supporting the Trunk; which, when full-grown, is often sixty Feet high before it branches, and, near the Ground, from three to four Yards in Circumference.

The whole main Body of the Tree is almost intirely covered with short stubbed Prickles.

At the above-mentioned Height it divides into several Branches, cloathed with long narrow Leaves set orbicularly on their Extremities.

They are so neatly joined to one another, that the whole Group, consisting of seven Leaves, have the Appearance of one digitated Leaf standing upon one common Footstalk of about four Inches long.

The Extremities of these Branches sustain likewise semicircular Bunches of rosaceous Flowers; each Flower consisting of five middle-sized Petals of a Cream-colour.

These are placed in a circular Order, inclosing the Pointal, which is likewise furrounded with five *Stamina* tipp'd with *Apices* of a yellow-reddish Colour.

The Whole is incircled with the *Calyx*, or a green husky Cup, resembling that of a Pomgranate-Flower, but less regularly segmented about the Edge.

The Petals have a weak faint Smell.

The Pointal becomes the Rudiment of the Pod, which is of a blunt conic Form of about four Inches long. The Inside is full of a greyish silky Down, intermixt with small blackish Seeds.

When this Pod is ripe, it opens; and the Down and Seed are carried off by the Wind to the adjacent Parts.

This Tree seldom bears more than once in three Years.

The SMALL COTTON TREE; Lat. Xylon.

THOUGH the Cotton-Wool is distinguished into the great, the Ravellin, the Vine and Flying-fish Sort; yet the Trees, bearing this Variety of Wool, differ very little from one another.

The Leaves of each are scalloped, of those bearing the great Sort, very deeply, not ill resembling a Curran-Tree-Leaf in *England*. Those of the Flying-fish Cotton-Tree are likewise deeply segmented; having their middle and transverse Ribs of a reddish Colour.

The Leaves of the Ravellin and the Vine are less scalloped, and more blunt-pointed.

Most of these Trees, or rather Shrubs, if permitted to grow to their own natural Height, would rise to about fifteen Feet high; but, as such a luxuriant Growth would prevent their bearing the Number of Pods, they would otherwise do, as well as shade the Corn and Pulse planted generally among them, the main Branches are therefore yearly lopp'd off.

The Flowers are composed of five large yellow Leaves, each stained at the Bottom with a purple Spot.

The Pistil is strong and large, surrounded at, and near, the Top with a yellow farinaceous Dust, which when ripe falls into the *Matrix* of the Pistil.

This is likewise surrounded, when the Petals of the Flowers drop, with a capsular Pod, supported by three almost triangular green Leaves, deeply jagged at their Ends.

The inclosed Pod, which is rather of a conic than a round Shape, opens, when ripe, into three or four Partitions, discovering the Cotton in as many white Locks, as there are Partitions in the Pod. In these Locks are interspersed the Seeds, which are blackish and small.

The Cotton-Wool (of which in the *East Indies* they make their finest Callico) is too well known to want a farther Description: Yet it would not be amiss here to observe, that, as the Inhabitants of the warmest Climates want cloathing, especially in the wet Seasons of the Year, indulgent Providence hath sufficiently supplied the want of Wool, here denied to Sheep, by causing a Vegetable to bear the finest Wool in the World.

However the Certainty of gathering a good Crop of this Kind is very precarious; since we may almost literally say of this Shrub, that in the Morning it is green and flourisheth, and almost in the same Evening it decays and withers: For when the Worms begin to prey upon a whole Field of Cotton-Trees, though they are at first scarce perceptible to the naked Eye; yet in three Days they will grow to a considerable Bigness, and so devouring in that short time, that they will reduce the most verdant Field, thickly and beautifully cloathed with Leaves and Flowers, into almost as desolate and naked a Condition as Trees are in the Month of *December* in *England*; leaving often not a whole Leaf remaining; by this means, especially if they

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come late in the Year, they greatly prejudice, if not intirely destroy, the ensuing Crop; and sometimes the very young Trees are by this means killed.

These Worms are of three Sorts, all of the Caterpillar Kind, and distinguished by the Names of the Black-Backs, the Streaked-Back, and the Fire-Worm. The last is of a russet Colour, and the least; but yet the most destructive.

When these grow to their destined Bulk, they spin and inwrap themselves in a Bag or Web, like Silkworms, in the few remaining Leaves, or any other Covering; after a few Days Rest in this their Aurelia-state, they turn into dark-coloured Moths, and fly away.

These Worms are observed most generally to make their Appearance after sultry Weather, especially if it thunders and lightens, and as the Weather is then more than ordinary sultry.

The WHITE-WOOD-TREE.

THIS Tree grows to a considerable Bulk; its Branches are numerous, and thickly cloathed with Leaves.

These in Make, Bigness, and Colour, very much resemble those of a Laurel.

The Flowers are of the tubular Kind, of a pale White without, and yellowish within. Their Extremities are much expanded and crumpled, and generally divided into five Sections.

These are succeeded by long greenish Pods, containing a great Number of long flattish Seeds.

The LOCUST-TREE; Lat. Siliqua edulis.

THIS grows to be a large Timber-Tree, very full of Branches.

These are thickly cloathed with Leaves of about three Inches long, of a deep-green Colour, and smooth-edged; and always set on in Pairs upon one common Footstalk; differing from all other Leaves, by having always one Part of the Leaf divided by the middle Rib far larger than the other. The Extremities of the upper Branches have many papilionaceous Flowers.

These are succeeded by a light-snauff-coloured rough Pod, of about three Inches long, and near two broad; inclosing a whitish spongy Pith; which covers two or three hard blackish Kernels or Stones.

The pithy Part hath a sweetish Taste, and is sometimes eaten; but the Whole hath a very disagreeable stinking Smell.

The CASSIA-FISTULA-TREE.

THIS Tree grows in the *East* and *West Indies*, as well as in *Egypt*, and several Parts of *Asia*. Its Height, when full-grown, is often no less than

than forty Feet. The Bark, especially upon the Trunk, is very much falcated and cracked; it generally branches pretty near the Top, bearing several middle-sized sharp-pointed green Leaves.

The Flowers, which are pentapetalous and many, are of a yellow Colour, hanging in Clusters upon several small Twigs.

These are succeeded by blackish Pods, from ten to twenty Inches long, and about three-quarters of an Inch Diameter; "having a Seam running the whole Length on the one side; and another less visible on the other."

The Inside is divided into a great many Cells, separated from each other by thin brittle Plates or Partitions covered with a black sweet Pulp.

Between these are the Seeds which are small, flat, and smooth.

The Pulp, taken by way of a Purge, is too well known to want farther Explanation.

This Tree grows generally in a dry rich Soil.

The MOABITE ; alias, the MANGROVE-BEARD-TREE.

THIS Tree never grows to be fit for Timber.

Its Branches are very thick, covered with small roundish green Leaves, set on alternately.

The Flowers are tetrapetalous and white.

These are succeeded by long falcated twisting Pods, containing eight or nine shining-black flattish Seeds; which are half-sheathed in a pulpy, Snow-white, and sometimes scarlet, Pith. These Pods open, when ripe; the inner as well as the outward Side being then of a fine Maidens-blush; which Diversity of Colours in the Seeds, Leaves, and Pods, makes it then appear very agreeable.

The white Pith is sometimes eaten; but looked upon to be very unwholesome. The Seeds are strung upon Silk, and made use of by the Negro Women for Bracelets.

This Tree is more planted for its thick Shade, to keep off the salt Spry of the Sea from Corn or Cotton, than any other Use.

The GARDEN MANGROVE.

THIS is perhaps, above all Vegetables, the most beautiful Evergreen; keeping, without the least Decay, or Withering, its grateful Verdure all the Year round. The Roots of this Tree are strong and many, penetrating deep into the Earth.

If suffered to grow to its natural Height, it often rises above forty Feet high, branching very thick on every Side, and consequently affording a delightful Shade.

The Leaves are many, very thick, and of a deep-green Colour, sharp-pointed, and smooth-edged; in Length about two Inches, and the largest about an Inch broad.

The most common Method of propagating this Tree is by laying the small lower Branches in Baskets of Mould, or Earth, till they take Root; but the most natural Way, as this is of the Fig-tree kind, is to suffer the several slender small Filaments, which issue from the main Branches, to take Root in the Earth.

The RED MANGROVE-TREE.

THIS generally grows about the Edges of Ponds, and often several Feet in Water. Its Roots divide into several Branches, and join together above the Surface of the Water, where each straggling Division meets, uniting into, and forming the Body of the Tree; which, from that Place to the Water, seems to be supported by numerous Stilts.

What *Pliny*, speaking of the Palm-tree, says, *Gaudet riguis, & toto anno bibere amat*, may be literally said of this, which very seldom grows, except in, or very near, the Water.

The first Appearance of the Flower is a small conic husky *Calyx*: This opens into four downy whitish-brown Petals, surrounding the Pistil.

When the Petals drop, the Pistil becomes the Rudiment of the Fruit.

The Flower-Cup, or *Calyx*, opens, and expands horizontally into four Parts.

The HOLY-THORN, or ROYAL-CASHIAW.

THE Trunk of a grown Tree of this Kind is above eight or nine Inches Diameter; and grows to above twenty Feet high.

The Bark is rough, somewhat sulcated, and of a dark-brown Colour. The Branches are numerous, and very prickly, especially towards the Top. From these extend very long flat slender gramineous Twigs; having on each side a great Number of very small Leaves, set on alternately.

From the Tops of the woody Branches, upon long green Footstalks, rise many yellow pentapetalous Flowers, out of whose *Discus* come several short *Stamina*, whose *Apices* are of a dark Brown. The Leaves in general are somewhat wrinkled; and one above the rest is much deflected, black, and appears stained with red Spots.

From strong Footstalks hang a great many Pods, black when ripe, including four, five, or six blackish oval Seeds, separated from each other by long Partitions.

It is the Opinion of some *Roman Catholics*, that our Saviour's Crown of Thorns was made with the Branches of this Tree.

The BEAN-TREE, or the SHROVE-TUESDAY; *Coralliodendron*.

THIS Tree is generally larger than most Apple-Trees; widely spreading its Branches on every Hand.



*To His most serene Highness
The Hereditary Prince of Saxegotha
This Plate is humbly Inscribed.
kc*

It is called *Shrove-Tuesday* from its never wanting Flowers by that Day. These are of a flaming Purple, and as they very thickly cover the Tree, they appear very beautiful, especially at that time, when the Tree is intirely void of Leaves.

The Make of these Flowers is not less remarkable; for they cannot well be registred under any Botanical Class.

Their first Appearance being an intire falcated small Pod, when this unfolds, it discovers several long purple *Stamina*, all joined to one common broad Footstalk.

These are succeeded by an husky Pod, containing one, two, or more red small Beans, with a black Eye to them.

The COCOA-TREE.

THIS seldom grows to any great Height; and never thrives, unless much sheltered from the Wind.

Its Roots are many, and the Bark of the Trunk, as well as its Branches, is of a whitish Green.

The Leaves are set on alternately, and are about eight Inches long, and near three broad, highly ribb'd on the lower Side.

The HORSE-NICKER, or CHICK-STONE-TREE.

THIS is a small groveling Tree, growing chiefly in a loose, marly, or sandy Soil.

Its Trunk soon divides into many Branches, cloathed with unequal pinnated Leaves, consisting of six or seven Pairs, of an oval Shape.

The small, as well as the large Branches, are likewise thickly covered with strong crooked sharp Prickles. These are so very numerous, and so sharp-pointed, as well as so variously inclined by the twining different Position of the Branches, that it is next to an Impossibility, without the greatest Deliberation, to extricate one's self when once entangled in them: They are therefore very properly planted upon the Borders of our Intrenchments; for they are the best Defence of this Kind that hath been hitherto known.

The Tops of the Branches end in an upright Spike, surrounded with small yellow Flowers.

From the Flower-cup, or *Calyx*, rise three small green Leaves, which deflect very much back.

These inclose five yellow spoon-like Petals, which surround several short *Stamina*, tipp'd with *Apices*.

The Flower is succeeded by a brownish echinated Pod, of about two Inches long, and one broad.

This incloses several roundish Seeds or Nuts, of the Size, Colour, and Shape of Marbles, which Children play with.

This is described in Plate XVIII.

SPANISH OAK.

THIS grows to be a large Tree, covered with a smooth greyish Bark. From the upper Branches rise many long Pedicles or Footstalks.

These sustain sometimes one, but oftener two Pair of sharp-pointed smooth Leaves, four Inches long, and two and an half broad.

From different Parts of the Branches rise many purple white papilionaceous Flowers. These are succeeded by four-inch-long falcated Pods, inclosing several oblong dark-colour'd Seeds, covered with a fine white soft sweet Substance ; which by a great many People is eaten.

The **RED WILLOW.**

THIS, as well as every other Species of Willows in this Island, grow to be large and very shady Trees ; for which Purpose they are generally planted near Dwelling and Out-houses.

The main Trunk hath a blackish smooth Bark. The upper Branches are long and slender : Those especially near the Top are thickly cloathed with Leaves of above three Inches long, and one broad, sharp-pointed at both Ends, and of a greenish Yellow. When at full Growth, the Weight of so many Leaves upon the Tops (chiefly) of such a great Number of slender long Branches makes them bow wavingly downward : By this means each Tree affords an agreeable imbrowned Shade.

The **WHITE WILLOW.**

THE Bark of this Tree is of a whitish-grey. The Leaves, which are four Inches long, and one and an half broad, are of the same Colour. These are set on the Branches alternately. The upper Twigs bear many white Blossoms. These are succeeded by seven-inch-long Pods, containing a great many greenish Seeds.

The **BLACK WILLOW.**

THIS Tree grows to a considerable Height, soon dividing into many Branches. The Subdivision of these into lesser ones is always thickly covered with Leaves. These are about three Inches long, and above an Inch and an half broad ; their under Sides of a Pale-white, and the upper of a Dark-green, smooth-edged, and sharp-pointed. There is something very remarkable in the Make of these Leaves, when young ; for, at their first Appearance, they are closely folded, or doubled together lengthways, from the Stalk to the Point, so that they appear like Half-leaves divided along the middle Ribs : When they grow near their destined Bigness, these seeming Half-leaves unfold into perfect regular whole Leaves. The Flowers, which are of two Sorts, both purple and white, stand upon strong Pedicles,

Pedicles, and are composed of four capsular Leaves. When these open, they discover several *Stamina* tipped with white *Apices*, surrounding a snuff-coloured Pistil, which is succeeded by a round long Pod, red within, containing several black Seeds in partitioned Cells; these are no bigger than Grains of black Pepper. The Pods are about three Inches long, and of a russet Colour. This Tree, by its numerous waving Branches, affords a delightful Shade.

The DOWN-TREE.

THIS grows to a considerable Height, clothed with large, roundish, scalloped Leaves.

The Extremities of the Branches sustain a great many Flowers.

These are succeeded by seven-inch-long blackish Pods, which are lengthways neatly gouged into seven regular Channels.

The Inside consists of a greyish fine silky Down, much resembling that of the Silk-cotton-tree-down.

The only one that I know of in this Island, is at the Estate of ——— Evans, Esq; in *St. Joseph's* Parish.

The FINGRIGO; or the SAVINE-TREE.

THIS shrubby Tree seldom grows above twelve Feet high, being very bushy, especially towards the Top.

Its numerous Branches are thickly guarded with small crooked Prickles; and clothed with very small Leaves of a surprising Make, being rather a Continuation of many Leaves, than distinct ones; for what in other Trees and Plants we call Footstalks, or Pedicles, are in this but so many narrow Leaves, supporting others somewhat broader.

They bear almost an innumerable Quantity of small Flowers.

These are succeeded by as many brownish very small *Capsulae*, each inclosing a black somewhat flattish shining Seed.

A Decoction of the pounded Leaves answers the End of *English* Savine.

They have likewise this additional Virtue; that if dried and powdered, and mixed with Corn, and given to Horses, it frees their Maw from the Bots, as well as all other Worms.

The PAPA-WOCKROE.

THIS Plant grows about a Foot high, having one strong Tap-root, besides several small Side-ones. The Leaves surround the Stalks and are very neatly serrated, very much resembling those of Nettles.

The Tops of the main Branches or Stalks support each a pentapetalous yellow Flower; the Petals small, and spoon-like: These are supported by five capsular sharp-pointed Leaves, yellow above, and of a russet Colour underneath:

The Petals surround a great many yellow *Stamina*.

Each Flower is succeeded by a small sharp-pointed Pod, inclosing a great many small Seeds.

The only Use that I know of this Plant is, that it is boiled as Sallad, and eaten by most Negroes.

The LARGEST SENSIBLE PLANT.

THIS grows to be about four Feet high. The Branches are thickly cloathed with a great Number of oval small pennated Leaves. From among these rise several three-inch-long Stalks, bearing each of them, on their Extremities, an uncommon stameneous Flower. The greatest Part of this is yellow; but on one Side of it appears a Tuft of pale-white *Stamina*, tipp'd with brownish *Apices*.

When these *Stamina*, as well as the yellow Part of the Flower, drop off, there appears an horizontal Group of small Pods of about an Inch and a quarter long, when ripe, and of a blackish-brown Colour, inclosing several small flattish black Seeds.

CRABS-EYE-VINE.

THIS is a long scandent Vine, cloathed with small pennated Leaves, each consisting of eleven Pair, with an odd one at the End.

The Flowers, being papilionaceous, small, and white, are succeeded by Pods, each inclosing two or three scarlet Peas.

Every one of these, at its Extremity, has a very black Spot, which makes it much resemble the Eye of a Crab. From thence it derives its Name.

The LEAST WILD PEA-VINE.

THIS is a slender reddish hairy Vine; cloathed at uncertain Distances with small green Leaves, generally three in Number, upon one common Footstalk.

From the Bosom of the Leaves rise many yellow papilionaceous Flowers, each succeeded by half-inch-long Pods, containing two small Peas.

The WILD POTATO-VINE.

THIS is a weak slender Vine, creeping upon the next Supporter it meets with; but most commonly it twines itself about *Guiney-Corn-stalks*, and blossoms about *Christmas*. These are of the papilionaceous Kind, and of a beautiful Mixture of the most snowy-white and deep-scarlet Colours.



To Richard Mead M.D.
Physician in Ordinary to the King:
THIS PLATE
Is most humbly Inscribed
(&c.)

Cytisus Cayan

The ROPE-MANGROVE.

THIS is a groveling Tree, seldom rising above eighteen Feet high : The Bark is of a light-ruffet Colour ; the Leaves are high-ribbed ; their Length about seven, and their Breadth near six Inches, supported each by a six-inch-long Footstalk. The Extremities of the Branches are beautifully decorated with large yellow Flowers, very much resembling those of the Cotton-Flower, except that they want the purple Spot at the Bottom. The Petals of this Flower, which are five in Number, are supported by a double Row of green capsular Leaves neatly jagged. The Pistil is strong, and divides into four knobbed Divisions : From the Side of it rise many yellow *Stamina*, tipped with the same colour'd farinaceous *Apices*. The Flower is succeeded by a roundish sharp-pointed Pod, divided into five Partitions, inclosing each a black kidney-like Seed. The most common Method of cultivating these Trees is by cutting the younger Branches into many Pieces, and sticking them in the Ground in wet Weather. It is called the Rope-Mangrove, from the Use that is made of the Bark of it to make Ropes or Halters for Cattle. These Trees grow most commonly in low moist Land, near the Water : They flower about *June* or *July*.

The JUNCTION-VINE.

THIS is a long trailing Vine, bearing a sharp-pointed heart-like Leaf. The Flower is monopetalous, very much representing, in its whole Shape, the *Placenta Uteri*. The *Labia* of the Flower are freckled with purple and white Spots. The Root of the Vine is exceeding bitter, and very useful to make bitter Diet-Drink. The Flowers are succeeded by a conic blackish Pod, which is very much sulcated on the Outside, and the Inside divided into partitional Cells, inclosing several small black Seeds.

The PIGEON-PEA-TREE ; Lat. Cytisus.

THIS grows to about nine Feet high : Its Roots are few, penetrating not deep into the Earth. Its main Stalk, or Stem, at about three Years Growth, is commonly near as big as a Man's Wrist.

I know of no Part of this Shrub but what is of some Use. The Wood is good for Fuel ; and by the often falling of its numerous Leaves, the Land it grows upon is very much enriched ; and its Fruit is of great Service, by affording hearty nourishing Food to Man and Beast. The main Stalk is generally divided into several bushy Branches : These are cloathed with long sharp-pointed smooth Leaves, green above, and covered with an hoary Mealiness underneath : It bears, upon two-inch-long Spikes, very many yellow papilionaceous Flowers, ray'd with purple Veins. These are succeeded by Pods of a ruffet Colour, when ripe ; containing

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taining three, four, or five, somewhat flat roundish Peas, separated from one another by a slender Partition. These Peas, green or dry, are boiled and eaten, and esteemed very wholesome, especially if used in the wet time of the Year; for, being of a binding Quality, they prevent Diarrhoeas and Dysenteries, so common in wet Seasons. I attribute their Restrictingency to a very small Quantity of a gummy resinous Substance, which is generally found, more or less, in each Pod.

These Trees are produced from the dry Peas, planted about an Inch deep. They grow to a considerable Bigness even the first Year, each bearing some Hundreds of Pods; the second and third still more numerous; the fourth and fifth they bear but very sparingly; in two Years more the Tree gradually decays and dies. They thrive best in a dry Soil, and soon perish in a wet one.

Thus "is much Moisture hurtful to some, whilst kindly to others; thus some Plants require a strong and rich, others a poor and sandy Soil; some do best in the Shade, others in the Sun."

This is delineated in Plate XIX.

NEMNEM, or TOOTH-ACH-TREE.

THIS Tree was first brought hither by a *Portuguese*, about fifteen Years ago; it takes its Name of the Tooth-ach-Tree from its rather supposed, than real Quality of curing the Tooth-ach. It differs very little, if any thing, except in its greater Bulk, the Length of its Prickles, and the more falcated Form of its Pod, from the common *Akasee*, already described.

The AKASEE or SWEET-BRIER.

THIS Shrub is of the thorny Kind, growing to about ten Feet high: Its Roots are strong and many, and penetrate very deep into the Earth. The main Stem, as well as the whole Shrub, is cloathed with a reddish-grey Bark; the Branches are somewhat geniculated backward and forward, alternately. From each of these grow several Side-twigs; on these are several Pair of very small oval pennated Leaves. The Flowers, which are of a globose Form, yellow, and of the stameneous Kind, rise from the Bosom of the Leaves on Stalks, or Pedicles, of about an Inch long, guarded at the Bottom with two sharp Prickles: These Flowers are succeeded by Pods of about four Inches long, black when ripe, containing eight or nine oval Seeds, separated from each other by fungous Partitions. The Roots, when bruised, yield an offensive Smell; and, if boiled to a Decoction, and drunk, prove mortally poisonous to Man, or Beast. The Pod, when half-ripe, affords so glutinous a Jelly, that it is made use of, instead of Cement, to join together broken *China* Ware. If the main Stem is wounded, there issues out, in few Days, a transparent Gum like Gum-Arabic. The Description which Mr. *Lemery* gives of the

Shrub which produces Gum-Arabic, answers very near to this. This is delineated in Plate XI. Fig. 2.

The FLOWER-FENCE, or SPANISH CARNATION; Lat. Ponciana.

THIS Shrub is distinguished into two Sorts, the one bearing a yellow Flower, the other a red and yellow mixt; the former is very seldom to be met with. The Shrub bearing both is of the same Species, and grows to be about six Feet high, sending out near the Top several slender Branches on every Side. These are thickly cloathed with many *Pennæ* of small oblong winged Leaves; the main Stalk is covered with a whitish grey Bark, the upper Branches ending in green long Spikes. These are spirally surrounded, upon long green Footstalks, with very beautiful Flowers, each composed of five Petals, which are generally red near the Bottom of the Leaves; and their Edges, which are finely waved, or sinuated, are deeply bordered and tinged with Yellow; and, where the Yellow predominates, it is generally rayed with fine Streaks of Red. These Petals are supported by five under-capsular, reddish, spoon-like Leaves. From the Centre of the Flower rise nine two-inch-long *Stamina*, of a flaming Purple, tipp'd with reddish-brown *Apices*, surrounding a reddish Style, which is the Rudiment of the Pod. This, when ripe, is about five Inches long, flattish and of a purple Black, divided into several partitional Cells; each Cell including a flat blackish Seed, not ill-resembling the Kernel of an Apple. Lye-water, made from the Ashes of the Roots of this Shrub, is looked upon to be good to bring down the *Catamenia*; and one of the Flowers, bruised and steeped in Breast-milk, is a gentle Anodyne; for which Purpose it is often given to quiet very young Children. These flourish all the Year round.

The DOG-WILLOW-RATS-BANE, or RAW-HEAD and BLOODY-BONES.

THIS is a scandent Shrub, cloathed with green smooth-edged round-pointed Leaves of about two Inches long, and an Inch broad. These are set on the Branches alternately. From the Extremity of the latter grow several roundish Pods, composed of four spoon-like Leaves, supported near the Stalk with four smaller capsular Leaves. When these Pods open, they discover a Tassel of long white *Stamina*, tipp'd with *Apices*; from the Middle of these rises the Pistil, which is near three Inches long, bearing upon its Top the Rudiment of the Fruit. This Pistil soon grows ligneous, and, at its full Growth, produces a five-inch-long Pod of a whitish-yellow Colour, streaked with two opposite scarlet Seams. The Inside is full of Cells, containing several small green Seeds. This Shrub grows chiefly upon rocky Places.

The

The FRENCH GUAVA.

THIS is a shrubby Plant, whose main Stalk hath a strong ligneous Texture. Its Side-branches are cloathed with several Pair of large oval winged Leaves, the upper Stalks ending in upright Spikes, which are covered for three Inches in Length with pendulous yellow Flowers, not ill-resembling those of the Aloe Plant. These are succeeded by several blackish long Pods, whose several partitional Cells inclose a great many round blackish Seeds. A Decoction of this Plant, or an Ointment made of a Mixture of its Juice, is looked upon to be of great Use to cure and dry up any cutaneous Eruptions. This flourishes about *Christmas*, and loves a rich Soil, as well as a shady Place to grow in.

The WILD FRENCH GUAVA, or STINKING-BUSH.

THE main Stalk of this Plant rises above four Feet high, bearing on its Side-branches several Pair of sharp-pointed winged Leaves. The Flowers, which are yellow, and much resembling those of the Tamarinds, are succeeded by five-inch-long blackish Pods, containing many small blackish Seeds. This derives its Name from the Likeness it hath to the *French Guava* Shrub, and from its stinking Smell.

The ARNOTTA SHRUB.

THIS, even at its greatest Growth, exceeds not twelve Feet, nor the Trunk, where largest, above three Inches in Diameter. It branches pretty much towards the Top, and is cloathed with middle-sized sharp-pointed green Leaves, whose middle and transverse Ribs are somewhat reddish. These are disposed on the Branches alternately. The Flower is pentapetalous, and of a bluish Yellow, composed of spoon-like Petals. The inclosed yellowish *Stamina* are tipped with purplish *Apices*. The Style, which rises from the Centre, proves the Rudiment of the succeeding echinated Pod, which is of a conic Shape. Its Inside is divided into several partitional Cells, inclosing a great many small Seeds, covered on the Surface with a red Substance; which the *Indians* on the Main dye their Bodies with. As the Method of preparing this Dye is not well known here, I shall not attempt to give any Account of it.

The LUCERN.

THIS Kind of Grass hath been but very lately cultivated in this Island, and even now but by some curious Persons. It is of a very quick Growth in wet Weather; but so soon dies in dry Seasons, that it is not worth cultivating here, however valuable it may be where there fall more constant Rains.

The WOOD-SORREL.

THIS differs very little, if any thing, from the same Species that grows in *England*: And its Virtue in Ptisans or Sallad is equally the same.

The JALLOP, or the FOUR-O'CLOCK-FLOWER; Lat. Jallapa.

THIS shrubby Plant grows to be about four Feet high, and is divided into numerous Branches, as well as by the different Colours of its Flowers distinguished into several Sorts. However, the Root of that, which bears a brown yellowish Flower, comes nearest in physical Goodness to the true Jallop. Its Leaves are winged, and the Flowers of the tubular monopetalous Kind, whose *Oræ* are divided into five Sections. The *Stamina* are tipped with five *Apices* of a scarlet Colour. These Flowers, though distinguished into the Purple, the Red, and the Yellow already described, have all their Footstalks covered over with soft *Villi* or Hair; and the Blossoms of each Kind are succeeded by small *Capsule*, containing in each a small black, husky Seed, inclosing a white Kernel.

I should have added before, that the Leaves are sharp-pointed, and above two Inches long, and an Inch and an half broad. The Flower expands early in the Morning, and generally continues open till Eight o'Clock; and then shuts, and seems almost wither'd, till about Four in the Afternoon; at which Time it blows anew, and continues open till Night.

The CRAB-TREE.

THIS tall Shrub hath a dark-colour'd reddish Bark. The Branches are many and crooked. The Leaves, which are generally in Pairs, are likewise unequal and ragged; the largest not exceeding two Inches long, and the smallest not an Inch. The Branches are guarded with very small scarce-perceptible Prickles. The Flowers are of the papilionaceous Kind, and succeeded by many small Pods.

The INDIGO-WEED.

IN the Infancy of Trade in this Island, Indigo, which is produced from this Weed, was one of its staple Commodities: But as the Improvement of Sugar became more beneficial, or rather, when our Neighbours the *French*, by their several Indulgences in Trade, as well as the cheap Purchase of their Land, were able to undersell us at foreign Markets, this Branch of Trade was so intirely swallowed up by them, that we have had no Indigo manufactured here for above forty Years past. Therefore it would be needless in me either to describe the Plant, if I

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could

could meet with any in the Island, or to trouble my Reader with the Method of making Indigo from it.

The JALLOP-VINE.

WHAT is here called the Jallop-Vine, grows near the House of the Honourable *Samuel Rouse*, Esq; Its Stalk yields a milky Juice. It bears an heart-like Leaf, and a Bell-flower.

SORREL.

WE have here, besides the Wood and the Garden-Sorrel, another tall shrubby Sort, distinguished by their Colour into the White, and the Red. These grow strong, and are seemingly ligneous, though they are of an annual Growth, produced from the Seed. Their Roots are many and fibrous.

The main Stalk grows often to be above three Feet high, red and hollow. The Leaves, which are deeply digitated, and their middle Ribs and Stalks reddish, are set on alternately. The Flower consists of five pale-white Leaves, gyrally incircling one another, and each deeply stain'd with a purple Spot at the Bottom, and inclosing a short strong Pistil surrounded with farinaceous Dust.

The Petals are likewise incircled with five sharp-pointed capsular Leaves, which, when the Petals drop off, close together into a conic-shap'd Pod. This, when ripe, opens into five Sections, discovering a russet Berry, which likewise, when ripe, opens into five Sections, and discovers a great many blackish Seeds.

These Leaves, as well as the Berry, are decorated as well as supported by a strong *Calyx*, which on the Outside is divided into nine sharp-pointed Sections.

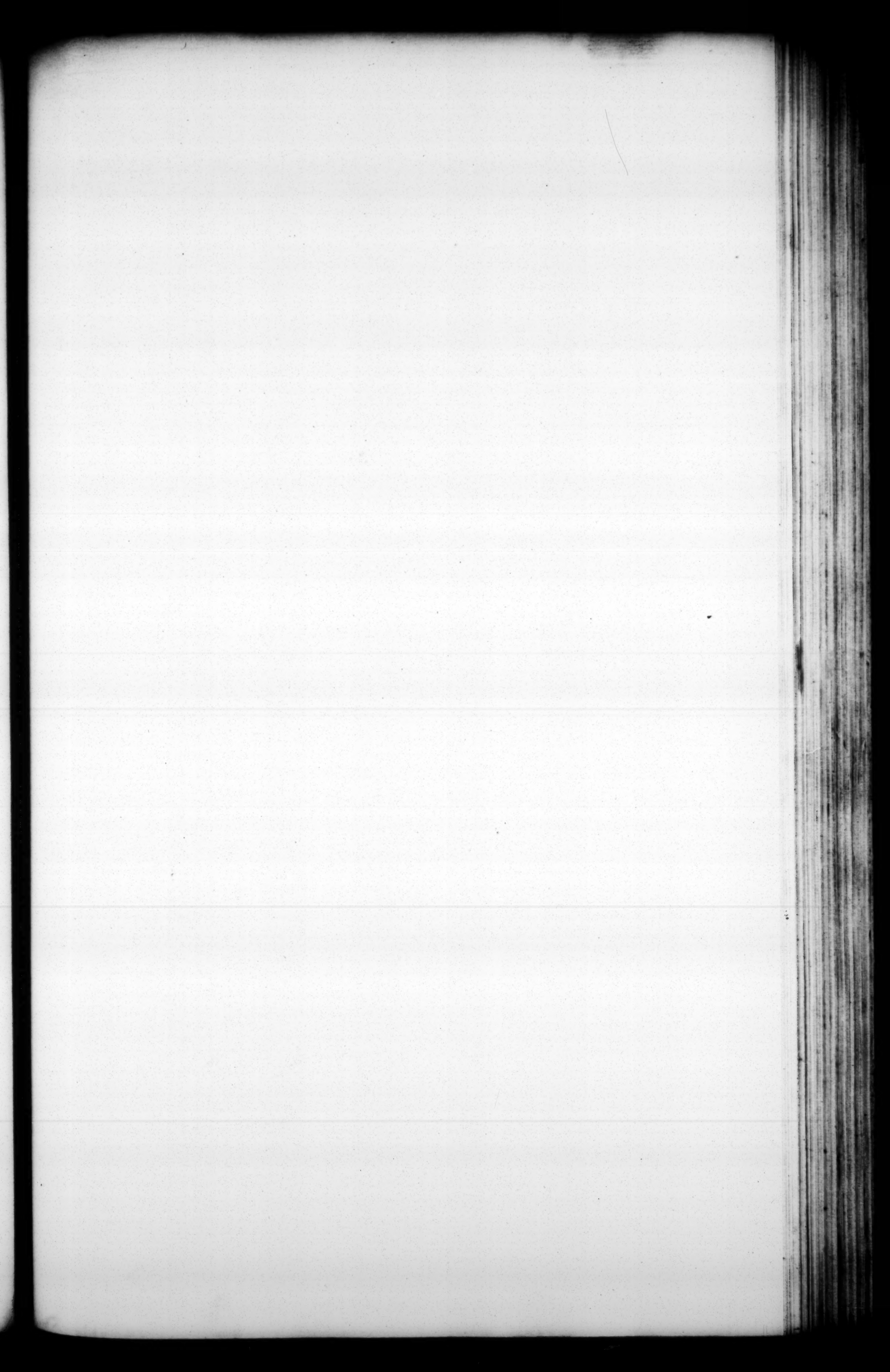
The red Leaves, and Flower-cup, being thick and very juicy, are, when ripe, seethed in boiling Water, which in a few Hours extracts both their Colour and Strength. This Decoction, work'd with Sugar, makes a very strong reddish heady Wine; and as these Plants are of two Kinds, the Red and the White, their respective Wines will be of these different Colours, but of the same Taste.

The red capsular Leaves, when young (first stew'd,) make excellent Tarts.

The Fruit is generally ripe about *November* and *December*.

The WILD SENA, or the WILD CASSIA FISTULA; Lat. Colutea.

THIS bushy Shrub grows to about four Feet high; the main Stalk pithy and brittle; the Branches thickly clothed with round deep-green





To the Right Rev.^d Father in GOD
JOHN Lord Bishop of Salisbury
This Plate is humbly Inscrib'd
&c

green winged Leaves, set upon the Twigs in three or four Pair. The Flowers are yellow and pentapetalous.

These are followed by five-inch-long brownish round Pods, somewhat falcated when ripe.

The Infides of these are divided, like the large *Cassa-Fistula*, into very many small Cells, separated from one another by thin pulpy Partitions of a sweetish Taste, including, in the intermediate Spaces, small blackish flat Seeds.

This is delineated in Plate XX.

The CHRISTMAS-BUSH.

THIS Plant grows to about three Feet high. Its Roots are many, but weak, always blooming in *December*; and from thence it derives the Name of *Christmas-Bush*.

It continues to bear Blossoms till the middle of *March*, and then gradually decays.

The main Stalk and Branches are of a strong gramineous Texture, and its Leaves, which are about two Inches long, and near as broad, end in a sharp Point.

Their Edges are snipped in three or four opposite Places, their upper Sides deeply furrow'd, and by far greener than the under, which, when young, are whitish, soft, and downy. On the Top of each Branch (generally speaking) stands a Group of very small white tubular monopetalous Flowers; their Tops are but barely to be seen, peeping out of long scaly *Calyces*; and from each Flower rise two very fine white *Stamina* with pendulous *Apices*. These numerous thready *Stamina*, so close together, give it, at a Distance, the Appearance of an intire stamineous Flower. When these drop, their *Calyces* become pappous, and full of long small blackish Seeds, each surrounded, like the Feathers in a Shuttlecock, with very fine white Down. A Cataplasm of this bruised Plant is esteemed not only an excellent Vulnerary, but likewise so great a Detergent, that it will not suffer the least proud Flesh to grow where it is applied. It grows in every Soil all over the Island.

The GULLY-ROOT.

IF the Virtue of *Asa-Fœtida*, in nervous and hysterical Disorders, consists chiefly in its efficacious Power of dispersing, by its strong Smell, the animal Spirits to their several proper and distinct Parts of the Body, the Roots of this Plant may perhaps claim an equal Degree of Virtue; for its Smell is so very offensively strong, that a small Piece of it will, in a short time, fill the largest Room with its disagreeable Odour.

POPS.

THIS is a succulent perennial Plant, having many fibrous Roots. The main Stalk is hollow, and the Outside divided into many irregular Angles. It widely branches towards the Top, and is thickly covered with thin sharp-pointed Leaves, of about three Inches and an half long, and about two Inches broad. The Edges of these are widely and irregularly serrated; the whole Plant growing to be about two Feet and an half high.

The Flowers, which are monopetalous and yellow, are divided into five Angles in a Star-fashion. The Inside of each Angle, near the *Discus*, or Bottom of the Flower, is stained with a brownish purple Spot. The whole Flower furrounds five *Stamina*, tipped with pale bluish *Apices*. These likewise furround a whitish Pistil. The Flowers are succeeded by small round bluish Berries, full of an agreeable Pulp, mixed with many whitish Seeds.

These are looked upon to be good Diuretics: The Berries, till ripe, are surrounded with a thin green *Capsula*, somewhat of a conic Shape: which is of a very slender Texture, and divided principally into five high convex purple Veins, interspersed with a great many lesser longitudinal as well as transverse Ribs or Veins. When the inclosed Fruit is ripe, this *Capsula* opens, and withers away.

FOSTER'S PLANT.

AS this Shrub hath been hitherto nameless, I have presumed to call it after the Person's Name who discovered to me, not only this, but several others. This shrubby Plant grows to about four Feet high. Its Roots are strong, penetrating deep into the Earth. The inside Bark of these, as well as the Pith in the main Stalk, is of a yellowish Colour; the latter somewhat inclinable to a red. Its slender Side-branches are clothed with five Pair of pinnated Leaves without, an odd one at the End; these are about an Inch and an half long, and near an Inch broad. From among these rise a great many papilionaceous Flowers; which are succeeded by long flattish Pods, inclosing a great Number of flat Seeds of a russet Colour.

The Leaves of this Plant, if bruised, yield a very offensive Smell. It grows chiefly in rich Land, and blooms in June and July.

The COW-ITCH VINE.

THIS is a long scandent Vine, creeping often to above twenty Feet high, if supported by neighbouring Trees or Rocks. Its Leaves are of a middle Size, sharp-pointed, and very thin, covered with soft *Villi* or Down, and set on the Vine in a Triparture-order. The Flowers of this Vine grow in Bunches.

The Appearance of each, at first, is an inch-long purple petalous Pod, which, when it blows, divides into two narrow purple Petals, discovering in the Middle, between both, a white long Pointal, hooked even to a Pricklinefs at its Extremity. This is likewise sheath'd with a thin white Membrane. When this, as the Flower grows, splits open, it discovers the Pointal to be fringed or divided near the Top into several *Stamina*, tipp'd with *Apices*. The two above-mentioned Petals are, near the Bottom, incircled with another purple Petal, not ill resembling the *Carina* of a papilionaceous Flower. The Whole is succeeded by a Pod near of the Shape and Size of a Pod of a full-grown *English Field-Pea*. This incloses several blackish small Beans. The Outfides of these Pods are thickly covered with very fine short *Setæ*, or stiff Hairs. If these, either blown by the Wind, or by any other means, touch the Skin, they will inflame the Part far worse than if touched with Nettles.

The ITALIAN SENA.

WHAT is called here the *Italian Sena*, hath many white stringy Roots spreading on every Hand. Its main Stalk soon divides into lesser Branches; these are cloathed with several Pair of winged pale-green Leaves of an oblong Shape. The Branches likewise sustain, on two-inch-long Footstalks, several five-leaved yellow Flowers; these are succeeded by falcated broad Pods, divided by several Indentings into many Partitions, which inclose dark-colour'd Seeds.

This, with a great many other curious medicinal Plants, is to be found in the Garden of Doctor *John Douglass*, near *Speight's-Town*, as well as in the Garden of Doctor *Reynold Alleyne* in *St. James's Parish*.

The MUSK-BUSH, or WILD-OCKRO.

THIS bushy Plant bears many small Branches, cloath'd with very hairy Leaves, divided into three deep Sections, forming as many partitional sharp-pointed Angles. The Ribs on the upper Side are somewhat reddish, on the under green. The Edges of these partitional Sections are irregularly indented: The upper Branches sustain a beautiful yellow Flower, composed of five round-pointed large Petals, each Petal above two Inches long, and stained at the Bottom with a purple Spot. These surround a large Pistil cover'd with yellow farinaceous Dust. The Top of this is almost surrounded, on short Footstalks, with blackish-purple *Apices*. The Flower is succeeded by a multangular fleshy Pod, every way resembling that of an Ockro. They are sometimes eaten, especially when very young; otherwise they taste musky.

The HORSE-VINE.

THIS Vine is small and creeping; taken notice of chiefly because it is looked upon to be good Feeding for Horses: Its green round-pointed Leaves are set on an inch Footstalk in a Triparture-order. The Flowers are succeeded by small Pods, inclosing a great many Seeds, or Peas, separated from each other by partitional Cells. It grows chiefly in shady Places.

The WILD-BASIL; Lat. Acinus.

THIS hath very small fibrous Roots: Its Stalk and Branches are square and deeply chanell'd. The Leaf is about an Inch and an half long, sharp-pointed, and somewhat indented about the Edges. It bears small fistular blue star-like Flowers, standing in Groups upon conic Tufts, whose Apertures are guarded with short hairy Spikes. In these are included the Seeds, which are very small, and of a blackish Colour. This Plant is justly look'd upon to be an excellent Vulnerary.

The HOLLY-HOCK; Lat. Malva Arborea.

THIS Plant much resembles the *Gundelia Orientalis*, *Acanthi aculeati* Folia, Capite glabro, growing in the Levant, and described by Tournefort. Its Leaves are very deeply lacinated, as all of the Thistle-kind are. The middle as well as the lesser Ribs are stain'd with blue milky Veins. The Stalks, near or at the Top, bear many yellow stamineous Flowers. These are succeeded by echinated brownish Pods, inclosing a great Number of brownish small Seeds: A Thimble-full of these, taken inwardly, proves an excellent Purge; and the yellow Juice, that, when broken, plentifully distils from the Stalk, is a sovereign Remedy to cure old Ulcers.

The CONEY-FLOWER-VINE.

THIS Vine creeps upon and supports itself by its numerous Claspers, twining round the Branches of neighbouring Trees. It bears a great many small heart-like Leaves; and at different Distances is decorated with large papilionaceous Flowers, the Extremities of whose *Alæ* are white, terminating near the *Carina* in a most deep beautiful Purple.

The *Carina* itself is white, and its Orifice cover'd with two small membranaceous Petals, having their Rise from the Footstalk-Part of the *Carina*; and, meeting on each side at the Orifice, they closely join together to cover it. These Leaves have their Parts, which thus join together, beautifully stain'd with Purple. The Pistil takes its Rise at the Bottom of the *Carina*; and, as it grows stronger and larger, its Point becomes divided into several *Stamina*, tipp'd with *Apices*, which, when ripe, fall into

into the Ovary; and then the Pistil, which becomes the Rudiment of the future Pod, pushes open the Orifice of the *Carina*, as well as bursts through the two membranaceous Leaves, that covered it. Soon after the Expansion of these the Flower withers, and drops off; and is succeeded by a four-inch long Pod, channelled in the middle on each Side with a deep Furrow. The Pod contains several small Peas or Seeds.

The SENSITIVE PLANT; Lat. Mimosa.

THIS is distinguished into the large and small Sort, the main Stalks somewhat hairy; each bearing proportionable small longish oval-winged Leaves. The Flowers, which stand upon three-inch-long Footstalks, are flameous. These are succeeded by small brownish Pods of an oblong Shape, and of about an Inch long. The Edges of these Pods are thin, and through their Middle, on each Side, rises a Ridge, which, on the Inside, contains a great Number of blackish small Seeds. The winged Leaves upon this Plant shrink very much upon the least Touch. The Pedicles, which support the Flowers, and the succeeding Pod, are, near their Setting off from the main Stalks, embraced with two heart-like sharp-pointed Leaves, of near half an Inch long. These intirely differ from all the rest.

The RABBIT-WEED.

THIS is of the Thistle-kind. Its main Stalk grows to be three Feet high, and hollow like a Pawpaw-Shank. It is thinly covered with small narrow Leaves, which are prickly about their Edges. The upper Branches sustain a great many Flowers composed of a Border of pale-white small Petals, surrounding a yellowish long Thrum, which, when ripe, proves pappous, and flies away into whitish Down. This Plant derives its Name from the Use that is made of it to feed Rabbits with.

The INDIAN ROOT.

THE Seed of this, some few Years ago, was sent hither from *Jamaica*, as a very valuable Plant. If the chimerical Gentleman, who sent it, had but had Coolness of Thought enough first, fully to discover its pretended Virtues, before he had recommended it, the Planters of this Island would have been much happier without it; for, as its Seeds are of the pappous Kind, they were soon carried over all the Island; and it too unluckily flourishes in every Soil, though useful to neither Man nor Beast. Its Roots are white, fibrous, and many. The main Stalk rises about eighteen Inches high.

The OCKRA; Ockro.

THIS excellent shrubby Plant is plainly a Species of Mallows. The Stalk is like that of a Mallow, and rises to about four or five Feet high, bearing, on and near the Summit, many large yellow Flowers succeeded by green conic fleshy Pods channelled into several Grooves.

Each Pod, when ripe, is from an Inch to two Inches and an half long, full of as many longitudinal Cells, as there are Channels of small round black Seeds. The long Ockro differs from that already described, chiefly by having its Stalk twice as high as the other, and its Fruit often four Inches long, and the Pod smaller. This likewise, with Care, may be brought to bear all the Year round. The Fruit is taken, when young and tender, and boiled and eaten with Butter.

They are of a very mucilaginous Nature; a great Restorative, very wholesome, and extremely lubricative. These are undoubtedly the Plants which the *Romans* so much valued, and which *Horace* so well describes by calling them *leves malvæ*.

COYERS.

THIS shrubby Plant hath several whitish Roots, smelling not unlike a Radish. The main Stalk, which is of a purplish Colour, branches very much near the Ground: From the several Side-branches issue a great many Footstalks, whose respective Tops from one common Centre sustain seven sharp-pointed Leaves, being almost equally sharp near their common Footstalk, where they all join; at which Juncture there is a yellowish Spot. The Flower very much resembles that of a Garlick-Pear-tree, consisting of four small Spoon-like Petals.

From the Centre of these rises a dark-coloured Pistil, from whose Sides, somewhat higher, issue six purplish *Stamina*, tipped with brownish *Apices*; the Pistil in the Middle still continuing larger than the *Stamina*, bearing upon it the Rudiment of the future Pod, which, when ripe, is of a flattish Shape, of about six Inches long, inclosing a great many small Seeds. The Juice of this Plant, mixed with sweet Oil, is looked upon to be a sovereign Remedy against the Pain in the Ear, if poured into it warm.

The MANY-ROOTS.

THIS Plant derives its Name from the great Number of its Roots. The several Stalks, which grow up from these, are about seventeen Inches high, and hairy. Their Leaves, which are crumpled, and have very turgid Veins, are about four Inches long, and three broad. From the Bosom of the Leaves rise many Pedicles sustaining large dark-blue Flowers. These are succeeded by very small brownish Pods.

A Decoction of this Plant, drank warm, is looked upon to be very good to heal sore Throats. It grows to equal Perfection exposed to the Wind, or in the Shade; and generally blooms in *June* and *July*.

NIGHTSHADE; *Lat.* Solanum.

THE Roots of this Plant are many, stringy, and white. The main Stalk, as well as the lesser side-ones, are of a deep-purple Colour, and herbaceous Texture, rising often to near two Feet. The Leaves, which are about five Inches long, and about four broad, are irregularly serrated into shallow as well as deep Sections; the Extremity of each being sharp-pointed. The Flowers are of the tubular Kind, having their Borders or Extremities much expanded, and divided into five equal Parts, ending in corniculated Points. This Border or Extremity of the Flower is of a pale White. Its long tubular Shank is finely rayed, the Inside with purple-bluish Veins. From its Centre rise five two-inch-long *Stamina*, tipped with grey-bearded *Apices*. The Pistil, being of equal Length, is tipped with the Rudiment of the Fruit, which, when ripe, is an echinated Pod of about an Inch long, inclosing a great many small blackish Seeds. The whole Flower seems withered, and closed up, in the Day-time; at least, till about half an Hour past Five in the Evening: Then it opens, and fully expands itself into a fine beautiful Flower.

This is no sooner in Bloom than the Fly-bats come from their lurking Holes, and, flying from Flower to Flower, dart into these, severally, their long twirling Tongue or *Proboscis*, with which they suck out either the Honey-dew, or some other Moisture from the Bottom of the Flower.

The Leaves are generally looked upon to be of great Efficacy to cure the Head-ach, by tying them to the Temples of the Person afflicted.

RATA-PEPER, or RATA OCKRO; *alias* Hoho.

THIS Plant hath a great many white stringy Roots. The main Stalk is green, herbaceous, and hairy, rising to about fourteen Inches. This and its Side-branches are cloathed with green Leaves. These are two Inches long, and near as broad; having several high Veins on their under Sides, and their Edges irregularly serrated. Among these rise several Footstalks or Pedicles, sustaining a great many yellow Flowers succeeded by long slender Pods.

This Plant is much made use of by our Slaves in their Soups and Broths; who esteem it, and not unjustly, a very wholesome boiled Salad.

MANY-SEED.

I HAVE given this Plant a Name from its many Seeds; which, from reckoning the Number in one small capsular Pod, and multiplying that one by the Number of remaining small round capsular Pods, the whole Plant, which sprung from one Seed, contained twelve thousand eight hundred and eighty Seeds. It seldom grows above three Feet high, and is forked.

COOT-WEED.

THIS, whilst young, very much resembles *Astragalus Orientalis*, mentioned by *Tournefort* as growing in the *Levant*; with this only Difference, that the Flowers of the Eastern Plant are white, and of this yellow. It affords, when broken, a rank fetid Smell; which shews that the Oil and Salts are in a volatile State.

RATTLE-BUSH, or SHAKE-SHAKE.

THIS Plant hath a great many white matted stringy Roots; the main Stalk dividing, almost as soon as it comes out of the Ground, into many green succulent Branches; these different Stalks, at different Distances, bearing, on Pedicles of about two Inches long, three blunt-pointed inch-long green Leaves. These are set on at the End of every Stalk in a Triparture-order. The Flower, which is of the papilionaceous Kind, is succeeded by a small Pod. The inclosed Peas, when ripe, make a rattling Noise when shaken by the Wind: From hence they derive the Name of *Rattle-Bush*, or *Shake-Shake*. They grow chiefly, or at least best, under the Shelter of an Hill.

The RED DIALTHÆA.

THIS is a low shrubby Plant; its Bark of a reddish Grey. The Branches are thickly cover'd with sharp-pointed Leaves. These are about two Inches and an half long, and near two broad. Their Edges are finely ferrated: The Flowers, which are of the herbaceous Kind, almost surround the Stalk in several Bunches. These, when ripe, are succeeded by several very small Husks or *Capsulae*, inclosing several brownish triangular Seeds. They grow chiefly in shady Places.

WILD-PARSLEY.

THIS derives its Name from the great Resemblance its Leaf hath to that of Parsley. The Flowers are succeeded by a small triangular *Capsula*, each Angle containing, in its Partition, one round smooth Seed,
of

of about the Bigness of large black Pepper. This, when ripe, is neatly marbled with black and white Spots.

The only Use that I know is made of this Plant, is, that the good Housewives make the Nests of their setting Hens of the Leaves and Branches of this, in order to destroy the Lice upon the Hens. The Seeds likewise are made use of, being strung upon Silk, instead of more valuable Beads, for Bracelets.

It flourishes about *June, July, and August.*

PEPPER.

AS the Species of these are many, I shall first give a List of their Names; and then proceed to a particular Description of such as are any-ways remarkable: Bonnet-pepper, ribb'd. Bonnet-pepper, plain. Negro-pepper. Bird-pepper. Cherry-pepper. Long-pepper. White-pepper. Olive-pepper. Spur-pepper. Rose-pepper. Isaac-Cape-pepper. Bell-pepper, and Turbilo-Pepper. The Pepper most commonly used, and most approved of, is what is called Negro-pepper. The Shrub that bears this seldom rises to above three Feet. It is very thickly cloathed with small green sharp-pointed Leaves, of about an Inch and an half long, and about one broad. Its Flowers, which are white, and five-leav'd, are likewise very numerous. It is observed, that, even before they blow, each of these hath a small wriggling Worm in its *Discus* or Socket. The succeeding Fruit is of a small oblong sharp-pointed Pepper, red when ripe, of near one third of an Inch long. This hath a very hot poignant Taste, attended with an agreeable Flavour.

SWEET-HEART.

THE Roots of this small Plant are many, penetrating deep into the Earth. The main Stalks are jointed, and are no thicker than Packthread. These rise separately from the Root, four or five in Number, growing to about fifteen Inches high. From each Joint of these main Stems, rises a slender Footstalk of an Inch long, supporting three small Leaves, set on in a triangular manner; the Top of each Stalk ending in a gramineous Spike, surrounded with many purple papilionaceous Flowers. These are succeeded by small Pods of about two Thirds of an Inch long, including five small Peas, or flattish Seeds. These are separated from each other by Partitions; and the Outside of the Pod is divided or segmented into so many semicircular Sections as there are Peas. The Pod is intirely incrusted with small *Setae*, or hooked Bristles, imperceptible to the naked Eye; by which means they tenaciously stick to the Cloaths of those who walk among them.

A Decoction of the Roots, boiled in Milk with the Bark of a *Guava* Tree, is look'd upon to be good to cure Fluxes.

The SPANISH-NEEDLE.

THIS under shrubby Plant grows in most Parts of the Island. It has many small fibrous Roots. On every Footstalk stand three sharp-pointed serrated Leaves, set on in a triangular manner, the opposite to the Stalk being the longest.

The Flowers are composed of a fistular yellow Thrum, partly surrounded with three white Petals. These are divided at the Top into two deep narrow Sections, which gives each Leaf the Appearance of three. The Seed-vessels are very small long blackish Spikes, surrounding the Top in a Whorl-fashion, having their Ends very much bearded and jagged, inclosing very small longish black Seeds.

This Plant is looked upon to be a good Vulnerary.

IRON-VINE.

THIS is a small creeping Vine, deriving its Name from the ferrugineous Colour of its Stalk and Leaves. The Roots penetrate deep into the Earth: The slender Side-branches bear upon half-inch Footstalks three sharp-pointed Leaves; the opposite to the Centre being the longest. This is about an Inch and an half long, and an Inch broad; the two other Leaves somewhat less. The Flower is very small, of a bluish Colour, and of the papilionaceous Kind.

The whole Plant, when bruised, yields a reddish rough Juice; which, if boiled into a Decoction, and drunk, is looked upon to be of great Service in Diarrhœas and Dysenteries. This Plant flourishes in most Places, especially in the Summer Months, when these are most common.

DOWN-VINE.

THIS is a creeping Vine, bearing a great many heart-like Leaves as well as several Flowers, which are succeeded by small Pods, filled with Down intermixed with small Seeds; the former serving as Wings to convey the latter over the adjacent Places. This Vine grows chiefly in Gul-lies, and such shady Places.

The WILD DOLLY.

THIS Plant rises about twenty Inches. Its Roots are small and fibrous. The Leaves are set three upon a Footstalk in Triparture-disposition. These are of a very deep-green Colour, and moderately sharp-pointed. From the Bosom of the Leaves rise many six-inch-long Spikes or Footstalks: These are respectively decorated at the Top with a beautiful purple papilionaceous Flower, and succeeded by a three-inch-long narrow Pod, inclosing in several partitional Cells small blackish Seeds, or rather Peas.

The

The WILD-TAMARINDS.

THIS very small woody perennial Plant resembles in Miniature, especially in its Leaves, Flowers, and Fruit, the large Tamarind-Tree already described.

The HORSE-EYE-BEAN VINE.

THIS, if supported by any tall Tree or Rock, will grow to above fifty Feet high. Its Leaves are large, and set on five-inch Stalks, three in Number, in a triangular Manner. Its Blossoms are of the papilionaceous Kind; which are succeeded by a large downy Pod, inclosing from one to three Beans, called *Horse-Eyes*.

This Name is given to them from their Likeness to the Eye of an Horse in Shape and Colour.

The HORSE-BEAN.

THIS is a long trailing Vine, with large beautiful green Leaves. Its Flowers, which are of the papilionaceous Kind, are succeeded by Pods often ten Inches or a Foot in Length, which inclose from nine to one-and-twenty large Beans.

The BEAN-VINE.

THE many different Sorts of eatable Beans, planted in this Island, are generally distinguished by the Names of Arbour-Beans, speckled Beans, *Carolina* Beans, the Sugar Bean, and the small Six-weeks Beans. The Arbour-Bean, which is by far the largest, takes its Name from its being often planted near Arbours; on which, if guided, it will creep, and afford an agreeable Shade. This Vine bears a Pod near six Inches long.

The WILD-PEA.

THIS is a small weak creeping Vine, which by its numerous Tendrils climbs up the neighbouring Trees, Shrubs, or Rocks. It is thinly cloathed with small sharp-pointed Leaves; each Pedicle sustaining three, set on in a Triparture-order. The Flowers are of the papilionaceous Kind, and white, except that near the Centre. They are very slightly stained with red. These are succeeded by a three-inch-long Pod, containing in partitional Cells about fifteen small Peas.

This Vine grows chiefly in shady Places.

The EATABLE WILD-PEA.

THIS is a slender Vine, supported by any neighbouring Bushes. It bears on every Footstalk three Leaves, set on in a Triparture-order; as well as, upon two-inch-long Pedicles, yellow papilionaceous Flowers.

These are succeeded by near three-inch-long Pods, inclosing several green Peas, which are often made use of by the poorer Sort.

The CUCKOLDS INCREASE.

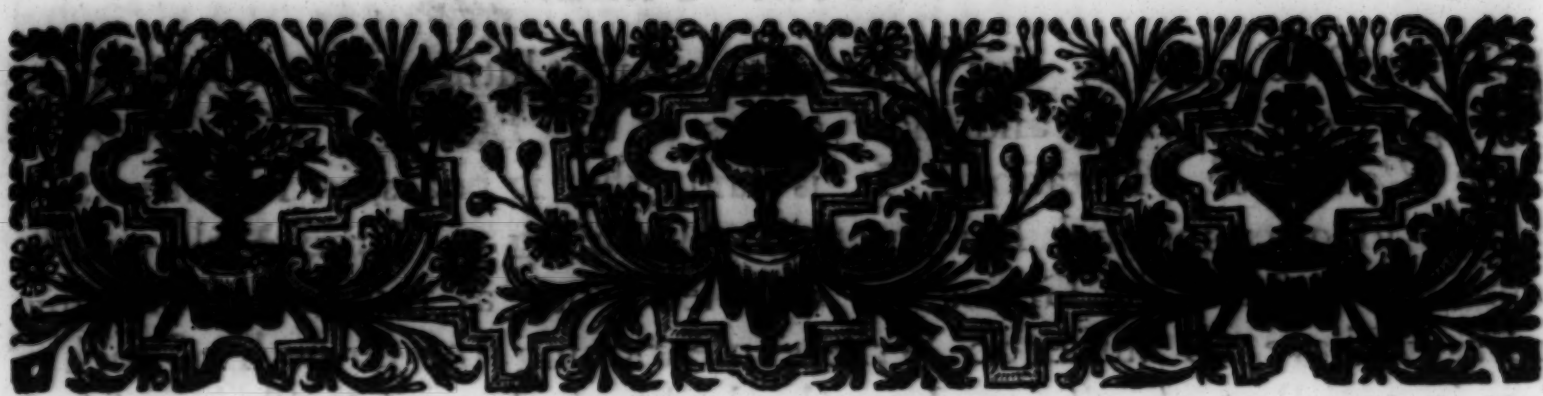
THESE grow upon short upright Stalks; and are distinguished into the large and small Sort. The Leaves are sharp-pointed.

The Flowers are likewise of the papilionaceous Kind, and succeeded by eight-inch-long roundish Pods. These, in their several partitional Cells, contain nine, ten, or eleven longish Peas, which, though somewhat windy, are generally liked.

The BUONA VISTA, commonly called Bonny-vis.

THE Species of these are distinguished into the Moon-shine, the Green, the White, the Red-and-black, and the Small Sort. The Vines and Leaves of these are of a greyish Green, round-pointed and broad, and the Flowers papilionaceous and white; except the black Sort, which have purple Blossoms. What are most commonly planted are the Six-weeks Bonny-vis. These are so called from their bearing Pods in about that time: These Pods are somewhat flat, of about two Inches long, inclosing three, four, or five Peas or Beans in partitional Cells. These are universally made use of, either green or dry; being looked upon (though somewhat windy, yet) a wholesome Grain.

The old Sort generally bears about *Christmas*; and if the Vine is suffered to grow, it will in two Years time, if supported, prove so ligneous and strong, that it will be no less than an Inch or more in Circumference. The Six-weeks Kind hath a more tender Vine; and though it bears sooner, it will neither thrive, nor last so long.



O F

TREES, SHRUBS, *and* PLANTS,

O F T H E

A N O M A L O U S K I N D.

B O O K V I I I.

GRAPPLE-WOOD.

THIS shrubby Tree hath a reddish-grey Bark. Its numerous Branches are spindling and weak. Its Leaves are smooth and green, somewhat above an Inch long, and three-quarters of an Inch broad, smooth-edg'd and blunt-pointed. I have never known this Tree to bear either Flowers or Fruit.

The FIVE-SPRIG-TREE.

THIS Tree derives its Name from the general Number of Branches, which horizontally surround the Stalk at seeming Joints, from one to three Inches asunder; the main Stem still growing strait upwards, surrounded at such Distances with the above-describ'd circular Branches. The Wood, as well as the Leaves, have an agreeable Smell: The latter are round-pointed; and what is most remarkable in these Leaves, is, that when upon the Tree, they are very green; but when dry, instead of turning to a russet Colour, they bleach into an almost perfect White.

The

The CORN-TREE.

THE Tree call'd by this Name was brought hither about twelve Years ago from *Guiney*, and now grows at the Estate of Mrs. *Warren*, at the *Black-Rock* Plantation. It is said, that it bears, in its native Soil, several long cylindrical Ears, not ill resembling a large Mold-candle, round which Stalk the Grains are disposed; but as this never bore any, and as we have no authentic Writers mentioning the Growth of such a Tree in any Part of *Africa*, I much doubt of the real Existence of such an one: However, it may not be amiss to describe it. Its present Growth is about sixteen Feet high, branching chiefly towards the Top; the Bark is of a greyish White; and its lesser Branches at the Top cloath'd with five green Leaves, surrounding one common Centre; these are two Inches and an half long, and an Inch and an half broad.

The SOUTH-SEA-ROSE; Nerium Indicum.

THIS is a very tall Shrub, whose Branches are many and slender, generally bending wavingly downwards; these are cloath'd, especially near their Extremities, with a great many sharp-pointed yellowish-green Leaves, near six Inches long, and half an Inch broad, set on three in Number round the Stalk; this Disposition is preserved at irregular Distances to the Tops of the Branches, which sustain, upon longish Footstalks, several five-leav'd red Roses. From the Centre of these first Border of Leaves rise three or four lesser red Leaves streak'd with White. The Colour of the Bark is of a darkish Red: The Roots, boil'd to a Decoction, prove a strong Poison, if drunk by Man or Beast. It grows chiefly in shady Places.

SOBER'S-PLANT.

THIS is a small straggling Shrub, divided in many Branches, cloathed with many small round-pointed Leaves of a Liver-colour. The Footstalks and middle Spine of each Leaf are prickly, and the Leaves, when bruised, smell very strong and disagreeable.

The FRENCH ROSE-TREE.

THIS shrubby Tree grows to about twelve Feet high, discovering in most Seasons of the Year, upon the Extremity of the Branches, several beautiful Roses, each consisting of five large white Leaves, whose bottom Parts are slightly ting'd with Red: By Noon these Leaves are of a blushing florid Red, retaining some small Appearance of their morning Whiteness; at Night, which is its last Stage, its Colour is of deep putrid Purple; then it withers, and its Leaves shrivel up. The *Stylus*, which these Leaves inclose, is divided at the Top into three fornicated Branches, and is surrounded from Top to Bottom with much yellow farinaceous Dust:

from these, in time, come a great many small blackish Seeds, which are lodged in a pappous Down, in these crumpled Leaves.

The Plant called PATIENCE.

THIS is a low creeping Plant, whose Leaves very much resemble those of the Plant called *Bachelor's Breeches*. A Decoction made from this Plant is looked upon to be of great Service to alleviate the Pain in the Stomach.

The TURKEY-WEED.

THIS Plant grows to about two Feet high; it bears, at about two Inches Distance from each other, several Pair of sharp-pointed winged Leaves, in Length near three Inches, and half an Inch broad; the Tops of the Branches sustain several small round capfular Seed-vessels. This Plant derives its Name from the Use that is made of it to feed Turkeys. It grows almost in any Soil.

GOATS-RUE.

THIS is a dark moss-like Plant, growing on the Inside of old Wells and Walls, from whose compact Bottom rise several plufhy *Villi* or small brown stiff Hairs, of about an Inch long; these are tipp'd with slender *Apices*, affording numerous small Seeds.

The WILD BASIL.

THIS woody Plant grows to the Height of about three Feet; its Bark of a black Ruffet: The Branches are cloathed with Leaves of a Silver-white beneath, and green above. These are high-ribb'd, and sharp-pointed. At every Inch Distance rises a stiff Footstalk, furrounded at the Top with a burry-ruffet Button, whose numerous *Villi* or *Setæ* are prickly. From among these are seen small tubular Flowers. The whole Plant is of a detergent Quality, and therefore often made use of to cure old Ulcers.

ROCK-BUSH.

THIS Plant hath many stringy white Roots. The main Stalk is of a dark Green, growing often to be four Feet high, and jointed at about every fix Inches Distance. The Leaves are large and sharp-pointed, being about five Inches long, and three Inches in Breadth, and of a dark-green Colour. This Plant grows in great Plenty at *Cluff's Bay*, in *St. Lucy's Parish*.

NETTLES.

THES E are of three Sorts, the White, the Red, and the Vine-nettle: The two former grow into upright Stalks, the latter a creeping Vine. The Red, whose Leaves are elegantly serrated, resemble the *Roman Nettle*, with this Difference, that the Pedicles of these, as well as the middle and transverse Ribs of the Leaves, are of a fine purplish Red. The Stalks and Leaves of each Sort are thickly cover'd with stinging hairy Down. From the Bosoms of some of the upper Leaves rise small Pedicles, supporting an horizontal Group of very small gramineous Flowers, succeeded by very many small flattish Seeds.

The WILD LAVENDER.

THIS is a shrubby perennial Plant, growing in sandy Places near the Sea; and hath in general (except that it wants its fragrant Smell) a great Resemblance to the Garden Lavender: It bears upon the Summit of its Branches many white small monopetalous Flowers, whose *Oræ* are divided into five Segments.

The ANTEGOA ROSE-TREE.

THIS grows to about fifteen Feet high. Its Branches are cloathed with many Leaves, of about two Inches long, and somewhat above an Inch broad. From among these, especially at the Extremity of the Branches, rise a great many pale-white monopetalous Flowers, whose *Oræ* are divided into five deep blunt Segments. These Flowers have a weak faint odoriferous Smell, and blow chiefly in the Months of *June* and *July*.

The SEA-SIDE SAMPHIRE.

THIS is a very succulent Plant, and differs from the *English Samphire* by the less Number of its digitated Sections, as well as by its more luxuriant Growth, being every Way larger; it grows upon the Rocks and grassy Banks near the Sea. It is generally distinguished into two Sorts, the Green and the Red. The Blossoms of each are composed of five pale-red Petals, supported by an equal Number of green capsular Leaves; the Petals surround the *Stamina*, which are of a pale Purple.

The WILD PENY-ROYAL.

THESE are of three Sorts: The largest hath a whitish green oblong Leaf; the second of somewhat a deeper Green, with a less and rounder Leaf; the third hath likewise very small Leaves, which, as well as the Stalks, are of a dull Purple. As the Roots, the Leaves, and Flowers of all these have a great Resemblance of Peny-Royal, it is from hence that they derive their Name, though they want intirely the strong Smell of that Plant.

INDIAN CALE, or SEVEN YEARS CABBAGE.

THIS is so called from the Term of Years that its Stalks will remain in the Ground, not only unperished, but will yearly produce very small Heads of Cabbage, besides lesser Sprouts; though the former are not near as close, nor so large, as our annual Garden-Cabbage.

The WILD CLOVE.

THIS Plant hath many white fibrous Roots: The main Stalk rises to about two Feet high, being cloathed with a great Number of narrow long sharp-pointed Leaves. The Flowers are small and white, succeeded by the blackish sharp-pointed Pods, which exactly resemble Cloves, from whence it derives its Name. These Plants grow chiefly in wet swampy Land.

The ROCK BALSAM.

THIS is distinguished into two Sorts, differing only in Colour, the White and the Red, each having thick succulent Leaves and Stalks. They grow chiefly upon Rocks, and old Walls; the Leaves are sleek, blunt-pointed, and roundish. From the Bosom of the Leaves rise long conic rough dentated Spikes, very much resembling small round steel Files; in the several *Laminae* or Foldings of these are contained the Seeds. The Juice of this Plant is very mucilaginous, and looked upon as an excellent Vulnerary.

The ARROW-ROOT; Lat. Maranta.

THIS is a very useful Plant, both physically and otherwise. Its Root is long, white, jointed, and mealy: The Juice of this is exceeding cold, and, being mixed with Water, and drunk, is looked upon to be a Preservative against any Poison of an hot Nature. Out of this Root is made likewise the finest Starch, far excelling any made with Wheat. The main Stalk rises about two Feet and an half high, surrounded at unequal Distances with smooth shining deep-green Leaves of about ten Inches long, and

and five broad; these somewhat resemble the Leaves of Plantain-shot. The Flowers, which are white and monopetalous, and of the labiated Kind, stand upon long Footstalks. It is generally dug up for Use in the Month of *February*. Of this there are two Sorts, the long and the short-jointed.

The LONG-LEAV'D MISLETOE.

THESE grow in Bunches, containing seven or eight Leaves; each Leaf being sharp-pointed, five Inches long, and near half an Inch broad. They are generally to be found growing in the Clefts of the Bark of Cedar-Trees.

ANTEGOA BALSAM.

THIS is a low groveling Plant, growing very thick, and close to the Earth. The Leaves are longish and sharp-pointed. The Flowers are white, and very small. A Decoction made of this is looked upon to be an excellent Healer of all inward Bruises, as well as a good Vulnerary and Styptic in external Wounds.

The SILVER-LEAV'D PLANT, or PISS-A-BED.

THE Leaves of this Plant spread near the Earth like the Leaves of young Lettuce, the upper Side green, and the under of a white hoary Mealessness, and feels plushy. From the Centre of these Leaves rises a Stalk of about two Feet long, whose Top supports a white downy Flower, somewhat like a Sun-Flower, which, when ripe, is carried about by the Wind.

The BROAD POND DUCK-WEED; Lat. Nymphaea Indica.

THE Leaf of this exactly resembles the white Water-lily, describ'd in *Gerard's Herbal*. Its Form is that of a Colt's-foot, green above, and whitish underneath. The Flower consists of five Leaves, and every way answers the Make of the same Species in *England*; but more especially their Roots, which are of a brownish-red Colour, and somewhat hollow within. These Roots are always fix'd in the Bottom of the Pond.

The BLACK-THORN; Pisonia.

THIS is what Sir *Hans Sloane* calls the *Fingrigo*, and under that Name he hath justly described it, excepting that the Colour of the Bark is always rather of a leaden Dark than a light Brown.

The Trunk of a full-grown Tree is about six Inches Diameter: The Tops, by the Weight of its numerous Branches, soon inclines downwards; and if supported by neighbouring Underwood, or even upon the Ground, they

They will grow, trailing along the Surface of the Earth, to often above twenty Feet in Length. The main Branches are thickly cover'd with two regular Sets of lesser Side-ones: These, as well as the Prickles they are guarded with, grow always opposite one to another, and by their contrary Position cutting, as it were, the larger Branches at right Angles; by which means, look which way you will, these lesser Branches make the Appearance of a Cross. Its Leaves are very slender, arising in Tufts three, four, or five, in Number; these are generally much torn and eaten by Vermin. It bears upon short Footstalks Groups of very small monopetalous bell-fashion'd Flowers, whose *Stamina* are tipp'd with *Apices*: These, which are of a dark-yellow Colour, have a faint weak Smell, and are succeeded by burry roundish Katkins, which are so very clammy, and full of very small sharp-hooked Prickles, that if a Bird alights upon them, they so entangle in its Feathers, that it will not be able to fly away.

The SNAKE-WOOD.

THIS is but a slender Tree, seldom above six Inches Diameter, even near the Ground; yet it sometimes grows to be above forty Feet high. It hath no Leaves, nor seldom Branches, till near the Top: There it is surrounded with Leaves similar to those of the *Popo-Tree*. The Trunk appears very knotty, if not jointed. The Inside is hollow, and the Whole so light, that a weak Man may easily brandish a Piece as big as *Goliath's* Beam, or *Hercules's* Club. I have never known it to produce either Seed, Flowers, or Fruit. This is delineated in Plate X. Fig. 2.

The MAY-POLE; Lat. Aloe Americana muricata.

THIS very remarkable Tree hath a great many strong stringy Roots. The Trunk, which is very strait and tapering, is always green; its Bark, very neatly divided into several close alternate Scales, or *Laminae*, of a triangular Shape, sharp-pointed at their Extremities. Each of these, as well as the Branches of the Flowers, lessen in Bulk, as they draw near to the Summit of the Tree, which is often above thirty-five Feet high, and three Feet in Circumference near the Ground; yet this surprising Magnitude is but the Growth of three Months time. The green woody Leaves, which surround it at the Bottom, are many in Number, each being from three to four Feet long, about seven Inches broad, and three thick, ending always in a black horny Point: One of these Leaves often weighs six Pounds. The Trunk of the Tree, about twelve Feet from its Summit, thrusts out a great Number of strong green short Branches in an alternate Order: These different Branches, with their respective Flowers, have been always thought (and not unjustly) to resemble the Branches of the Candlestick in the Temple of *Solomon*: Each Candlestick or Branch sustains an horizontal Group of Flowers near twenty-five Inches in Circumference;

ference; the Whole, which at a Distance seems to be but one, is composed of several Scores of single yellow Flowers, each of these standing upon a longish pod-like Stalk of a yellowish Green, terminating in six sharp-pointed thick yellow Petals. From the Centre of these rises the Pistil, which is strong and blunt-pointed; the Petals surround six *Stamina* of about two Inches long; these are tipped with large falcated *Apices*, which, when ripe, are covered with yellow farinaceous Dust. The Socket of the Flower is thickly besprinkled with a very sweet Honey-dew: This draws to it Abundance of Humming-birds and Bees. The Inside of the Trunk is a snow-white Pith, spongy and porous; When the Blossoms are dropped, their husky long Pedicles shoot out into many sharp-pointed Leaves of about two Inches long, and near as broad: These, growing close upon one another, are somewhat, at their Extremities, expanded, and form a Sucker not very unlike a Pine-sucker. When these grow ripe, they fall down to the Ground, and take Root.

In a short time after it hath produced Flowers, the Body of the Tree, which so late was tall and flourishing, falls prostrate to the Earth, and perisheth; and the very large Leaves, which surrounded it at the Bottom, in like manner wither and die. Having cut down one of these at the End, as I was informed, of three Months Growth, however surprising it may appear to some, yet it measured full nine-and-twenty Feet in Height, and very near three Feet in Circumference near the Earth; and, having carefully weighed it, its Weight amounted to two hundred and ten Pounds; so that its additional Weight each Day was far above two Pounds: Or if we consider its Height, and its Number of Days in growing, we shall find, that it grew three Inches and about three Quarters of an Inch in every four-and-twenty Hours. This very extraordinary Growth far surpasses any other Computation hitherto taken notice of, being far superior to the Remarks of the ingenious Mr. *Helmont* upon the Willow he planted, after five Years Growth of which, the Leaves, Roots, main Stalk, and Branches did not exceed five hundred Weight.

FOREST-BARK, or BASTARD LOCUST.

THIS grows to be a large Tree cloathed with longish green Leaves; the Bark is much fulcated, and made use of as a good Restringent.

The GUM-ELEMI TREE.

THIS grows to be a large Tree, from whose Trunk, when the Bark is wounded, flows the Gum called the *Gum Elemi*.

The SILK-GRASS; *Lat. Aloe Barbadiensis.*

THE several saponaceous green Leaves, surrounding this Tree near the Earth, and taking their Rise without any Footstalks from its Trunk, are about two Feet and an half long, seven Inches broad near the Middle, and
about

about one thick, ending in a sharp Point. Their Edges are guarded with sharp crooked Prickles. The Trunk of the Tree is green, and crowded, at several regular Distances, with numerous scaly prickly *Laminae*, which in general much resemble those of the *American Aloes* already described; except that this Tree is much less in Bulk and Height, as well as that the Spire or upper Part of the Trunk is so weak, that it bends wavingly downwards, partly by its own Weakness, and partly by the Weight of Suckers which grow upon it, especially near the Top. These are composed of several complicated Rows of green thick Leaves: From the Centre of these rise several single Flowers standing upon a pod-like Footstalks: Each of these are made up of six blunt-pointed Petals, green on the Outside, and white within. These inclose six *Stamina* tipped with *Apices* surrounding a Pistil, which swells in an angular manner near the Middle. The above-mentioned Leaves, which encompass this Tree near the Earth, are made up of very many fine longitudinal white *Laminae* or Filaments of Thread-like Hemp, or rather as fine as the best Flax. These are easily separable from the green pithy Substance of the Leaves, and each again divisible into innumerable Divisions as fine as Hairs. With these, twisted together, are made Lashes for Whips of a very durable Nature: And I am of Opinion, that by their Stiffness the Filaments from this Plant are mixed with the Silk in making the *Indian Silk Handkerchiefs*.

The HOP-WEED.

THIS hath many white stringy Roots. The main Stalk is quadrangular, green, and hollow, and at every two or three Inches Distance seemingly jointed; from these several Joints opposite to one another rise three or four Leaves on inch-long Footstalks, in Breadth near the Pedicles above three Inches, and in Length above four. These are high-veined, and very much corrugated, or crumpled. The Stalk, at its Extremity, bears an echinated flattish Bottom, or Bur, which, when dry, hath an agreeable fragrant Smell. The Leaves of this Plant are esteemed good to be made use of as a Gargle in sore Throats. It begins to bloom in *July* and *August*.

BRINY ROOTS.

THIS scandent Shrub takes its Name from its most useful Parts, which are its Roots. Its main Trunk seldom exceeds the Bigness of one's Arm; its Branches are weak, climbing upon any neighbouring Tree. These are thickly cloathed with winged green Leaves, sharp-pointed at their Extremities, as well as at their Footstalks, their Edges being very elegantly waved or labiated: Among these, upon short Footstalks, appear the Flowers, which are composed of five Petals, snowy-white. The Roots, when bruised, afford a very offensive Smell. This, steeped in Water, and fermented, or made into a Decoction, is very purgative, and esteemed beneficial to dropical Persons, and very useful to prevent or cure the Scurvy, and to open Obstructions.

The

The best Method of preparing it is, to scrape a Handful of the Bark from the Root, and make a Decoction of it.

The TURK'S HEAD ; Lat. Melocactus Americana major.

THIS is called by the Antients *Melocarduus echinatus*, and hath a great many strong fibrous Roots. Its main Body, which grows above-ground, is about a Foot long, and about two Feet in Circumference. The Inside is a stringy pulpy reticulated Substance. The Outside of this is green, and channell'd into several deep Furrows, whose Eminencies are thickly cover'd, at certain Distances, with Tufts of Prickles, of about an Inch long ; the rest of the main Stem being green and smooth, ending, as it were, in a round somewhat flattish Top ; from whose Centre rises another less Body or Stem of cylindrical Form, of about eight Inches long, and three in Diameter. This is thickly covered with very sharp long fine Prickles, of a Snuff-colour. The Outside of this Part of the Stem or Stalk is of a spongy soft pappous Nature, especially near the Top, from which Place rise several many-leav'd Flowers, of a Maiden's-blush. Each of these is succeeded by a small scarlet Berry, inclosing several small flat brownish Seeds.

Y A M S ; Lat. Ricophera.

THIS very serviceable Root was formerly the peculiar Growth of *Africa*, and the most common Food of its Inhabitants. In all Probability, it derives it's Name from the Verb *Yam*, to eat ; which is a Word made use of, and equally understood, by most, if not all the several Nations upon the Coast of *Guiney*, though differing otherwise in their Language, Customs, and Manners. They are planted at about three Feet asunder, in small Hillocks, such as are prepar'd to plant Hop-roots in *England* ; the Ground being first hol'd about six Inches deep. The Method of doing it is, by putting about three very small Yams in each Hillock, in the Months of *May* or *June*. These sprout out soon after with the first Rain, and grow into a long trailing angular Vine, bearing a very handsome heart-like Leaf. This Root or Yam much resembles, at first Sight, by its blackish stringy Skin or Tegument, the Root of a small Tree. They are dug up of different Shape, as well as Weight ; the latter from twenty to half a Pound. However, the most common Weight is about two or three Pounds : These are somewhat of the same Nature as Potatoes, mealy and white within, but generally of a closer Texture than the former. They are justly esteem'd to be very hearty nourishing Food, and are generally preferr'd to Bread by the Inhabitants of the Island. When first dug out of the Ground, they are either put in Sand, or kept in a Garret, where they are well cur'd, by admitting the dry Air to them. The Method of making use of them is, either by roast-
ing

ing or boiling them; if the latter, they ought to be first peel'd. It is thought in *England*, that they must be first soak'd in Water before they are used, to draw out their sharp biting Taste; but this Opinion is entirely groundless. Great Care ought to be had in digging them from the Ground without being bruised, for those that are will soon afterward decay. The best Method that is yet found to preserve such, is to sprinkle the bruised or broken Part over with Lime. However, after all preservative Means, such must be us'd first; the others will keep fit for Use for near a Twelvemonth.

The PRICKLY YAM-VINE.

THIS is a slender Vine, covered with sharp-pointed Heart-like Leaves, set on alternately. At the Root of this Vine grows a Yam, in Taste exactly the same with those dug up yearly in *January*. What is most remarkable in this is, that it bears all the Year round; and when a Yam is dug up, a small Slice of the upper Part of it, in which the Roots of the Vine are fixed, must be still left in the Ground, which will grow downwards to the Bulk of that already cut off. This Amputation may be made for several Years, and perform'd several Times in the same Year, the Vine and its Leaves still flourishing.

The WILD YAM-VINE.

THIS is a quadrangular Vine bordered or skirted at each Angle, with a high green thin Lift; the Leaf is umbilicated and hastated, of a deep-green Colour.

EDDAS; *Arum maximum Ægyptiacum.*

THE different Species of *Eddas* are distinguished into the blue *Eddas*, the scratching *Eddas*, and the roasting *Eddas*; the Leaves of each being hastated, and of a blunt Arrow-head Shape. That of the blue *Edda* is very large and green on the upper Side; the under is covered over with a glaucous Measiness. The most common that are planted are the roasting *Eddas*; these yield a great Increase, and are a very nourishing and healthy Food, especially if stew'd. The spiral gramineous succulent Stalks that support the Edda-blossoms, as well as the young tender Leaves, are used by Negroes by way of Salad. A Field of *Edda*, when in Blossom, affords, in a calm Morning or Evening, a very fragrant odoriferous Smell. These are of a round conic Shape; the outside Skin being of a dark-brown Colour, the Inside very white, and something of the Artichoke-kind. The most common roasting Kind are dug up and gathered in at one Time; but some of the *Eddas* may be taken from the Root of the large Sort, and if the Earth is closed up again, the Plant continuing to thrive, will still produce more.

M m m

POTATOES.

POTATOES.

THESSE very useful Roots are distinguished in this Island from one another into at least thirteen Sorts; but as this great Variety hath but very small real Difference, I shall therefore pass by these and less necessary Distinctions, and divide them into the white and red, the long and the round Sort. Each of these differs from the *English* Potato, by being propagated by a Slip or Vine, which they produce instead of upright Stalks. Another remarkable Difference is, that the *West-India* Potatoes have all a sweetish Taste; they are here look'd upon so beneficial, that there is scarce an Estate, where there is not a considerable Quantity of Land planted with them; for these with Yams and Plantain serve instead of Bread to most of the midling, and almost intirely to the poorer Sort; tho' they are not quite destitute of a kind of Bread, made with these Roots: For the Potatoes being first grated, and the Juice pressed out, the flowery or mealy Part is mix'd with Sugar and Spice, and made into Paste, which being baked in the Oven, in the Form of a Plum-cake, its Taste is far from being disagreeable; this they call *Pone*. With the expres'd Liquor of either the red or the white Potato is made what we here call *Moby*, or a Sort of cool Drink, answering to small Beer in *England*. The Method of making this, is to mix the raw expres'd Juice of the Potatoes with a certain Quantity of Water; this in a seasoned Vessel will soon ferment, and in about four and twenty Hours be ready for Use; it tastes cool and sharp, and it is generally esteem'd a healthy Liquor. The Juice likewise of Potatoes, if fermented, will, by Distillation, yield good Spirit. The Vine producing each Sort is long, and trailing close to the Earth, taking Roots with its numerous Joints in wet Weather; these burrowing into the Ground bear a great Number of Potatoes: Tho' the Leaves upon these different Vines vary somewhat in Shape, yet in general they are all scollop'd, and bear bell-fashion'd monopetalous Flowers, whitish without, and of a deep Purple within, each Flower being slightly segmented about the Edges. These are succeeded by small capsular Seed-vessels, inclosing several blackish small Seeds.

The WHITE-LILY; *Lat.* *Pancratium Americanum*.

THE main Root of the white, as well as all other Lilies, are bulbous and round like an Onion, fastened to the Earth by several small white fibrous Strings or lesser Roots, the former being squamose, or compos'd of several Coats one over another. The Leaves are many and sharp-pointed, being about ten Inches long, and near three in breadth. From the middle of these rises a green flattish hollow Stalk, this near the Top is surrounded like the Ribs of an Umbrella, with six four-inch-long Stalks, the Flowers consisting of a double Border of five Snow-white Petals four Inches long, and about a quarter of an Inch broad, bending downwards in a very beautiful

beautiful Manner; above these, from the Centre of the same Parent-stalk, rise six small Spikes in a circular Manner; these near their Tops are green, each, as well as one other *Stamen*, which rises from the middle; these are tipp'd with falcated brownish *Apices*. The Bottom of these Spikes or Ribs are white, join'd together within half an Inch to the Footstalk with a very fine white Membrane, forming an agreeable pyramidical Flower, out of whose *Discus* rises the above-mentioned *Stamen*. The bulbous Root of this, as well as the different other Species of Lilies, here are made use of by way of Decoction, and look'd upon as a good diuretic Drench for Horses.

The RED-LILY.

AS the pale red, and the red and white Lily, differ from this only in Colour, I shall include them under the same Description. Their Roots are of the same Make and Texture as the white Lily already describ'd. The Stalk of the red Sort, &c. is about eighteen Inches long. The Flower is compos'd of six Leaves, somewhat sharp-pointed at their Extremities, as well as near the Stalk; their Outsides are almost intirely red, as well as the Inside, except near the Socket. There their Colour alters from a flaming Red to a greenish White; out of the *Discus* rise six purplish *Stamina* tipp'd with yellowish *Apices*.

The WILD-LILY.

THIS hath a bulbous scaly Root. The Leaves, which are thick, green and smooth, are of about ten Inches long and sharp-pointed, set on round the Stalk *squamatum*; from the middle of these the Stalk extends higher than the Leaves, ending in a russet Spike full of small Seeds.

The WILD-TULIP.

THIS hath a bulbous scaly Root, from which rises a green upright hollow Stalk of about fifteen Inches high, supporting, upon separate Pedicles, several large beautiful Flowers, compos'd of six Petals; each Petal about three Inches long, somewhat sharp-pointed at both Ends. The middle Part of every Flower-leaf is of a fine deep Red and White; on each Side these surround six white *Stamina* tipp'd with *Apices*. They are in Bloom every Evening about five a Clock, and likewise in the Morning till about Eight.

The FIT-WEED.

THIS is a small Plant, seldom rising above six Inches high. The main Stalk, as well as the Side ones, are jointed; at each Joint they are surrounded with several small Leaves, each deeply segmented, dividing the

the Extremity of the Leaf into three sharp prickly Points: From among these Leaves rises a small conic squamose Spike not ill resembling a Pine in Miniature, in whose different *Laminae* are contained the Seed: A Decoction from this Plant is looked upon to be very efficacious to cure Fits so often incident to young Children.

LOGGERHEAD WEED.

Spigelia Anthelmintica
THIS small Plant hath a great many fibrous whitish Roots, the main Stalk, which is hollow, seldom rises above six Inches high, this is of a purplish Colour; and from it rise three Pair of Footstalks or Pedicles opposite to one another, each sustaining on its Extremity four sharp-pointed narrow Leaves deeply channelled in the middle, as well as the transverse Ribs. From among the upper Leaves rises a short slender Spike decorated with a small whitish red tubular Flower divided at the Top into five Parts; these inclose a great many yellowish *Stamina*: A handful of the Leaves boiled in a Gallon of Water till reduced to half that Quantity, and that Decoction being made palatable with Molasses and a small Quantity of Lime-juice, is very efficacious to bring away and destroy the Worms in Children. The common Method of using this Decoction is to give the Patient (if a Child of about seven or eight Years old) about the Quantity of two Spoonfuls cold, upon an empty Stomach at Night; by the next Morning it will have its desired Effect; if not, let the Dose be repeated for three Nights successively. It must be used whilst fresh, otherwise by its great narcotic and stupifying Qualities it becomes very dangerous.

The PINE APPLE; *Lat.* Anana.

IF the general, or at least if the Judgment of the most numerous Part of Mankind, who have tasted of this Fruit, may be relied upon, it deserves the Preference of all other Fruits; the agreeable Variety, and the delicate quick Poignancy of its Juice is justly esteemed to excel every other. The Roots of this Plant are many, spreading in a circular manner. From the Centre rises a hard strong Stalk surrounded near the Earth, and for a considerable Way up the Stalk with long green Leaves, whose Edges are finely serrated. These Leaves are set on alternately; the Top of the Stalk sustains the Fruit which is called the *Pine*, from some Resemblance it hath on the Outside to the Cone the Pine-tree bears. The Top of the Fruit is beautifully decorated with a *Corona* of fine green sharp-pointed Leaves, whose Edges, as those below on the Stalk, are finely serrated. When the Fruit is young, of about four Inches long, it is surrounded, especially near the Top, with fine blue Flowers, each consisting of one Leaf, which is divided into three Parts, and is funnel-shaped. The Embryos are produced in the Tubercles: These afterwards become a fleshy Fruit full of Juice. The Seeds, which are lodged in these Tubercles, are very small, and almost kidney-shaped. Some time before the Fruit is ripe, two, three, or four Suckers grow from the

Stalk



To his
DUKE OF RICHMOND,
Knight of the Most
and MASTER of the HORSE



Grace the
LENOX AND AUBIGNY.
Noble Order of the Garter,
to his MAJESTY.

Stalk below, yet close to the Fruit: These Shoots are taken off, and planted; and will in about fourteen Months time produce a ripe Pine. Those who cannot procure these Suckers, sometimes plant the Top or *Corona*. This, though intended by Nature chiefly as an Ornament to the Fruit, yet will grow, and in time bear a Fruit, not so soon, nor so good, as that produced by those Suckers, which Nature intended to be the Means of propagating this Fruit. The three best Sorts of Pines are the *Surinam*, the Sugar-loaf, and Queen-Pine. The Fruit ought to be eaten soon after it is cut, nor ought it to be kept upon the Stalk in the Garden, as the Custom too often is, till it be very soft on the Outside.

This is delineated in Plate XXI.

The WILD PINE.

THIS differs in Taste from the Pine already described, as much as a Crab-apple doth from the best Ruffet or Golden-pippin. Its Leaves are very large, in proportion to the Bulk of the Fruit, which is but small.

The LARGE WILD BARREN PINE; Lat. Caraguata.

THIS, in Propriety of Language, ought to be looked upon as an aquatic Plant, though suspended in the Air among the Branches of lofty Trees, to whose Boughs it is fastened by its numerous Roots, which serve not to suck, or draw from them any nutritious Juices to further its Growth, as the *Mistletoe* doth from the Orange-tree, &c. but only to be its Supporter; provident Nature having in a very extraordinary Manner supplied this with other Means to preserve its Species; for the Leaves, which much resemble those of Pine, but only larger, surround this Plant in a circular manner, each Leaf near the Stalk terminating in an hollow Bucket, which contains about half a Pint of Water. It is by these numerous small Reservoirs of Water that the Roots, as well as every other Part of this Plant, are supplied with Nourishment without the Help of any Earth. The flourishing Condition of this, as well as the great Growth of Fig-trees upon barren Rocks, shews that Water is of greater Use to Vegetation than Earth.

The BUTTON-PINE.

THIS chiefly differs from the common Pines by its Smallness, as well as by its sour Taste: Therefore it is never cultivated. Its outward Coat is likewise redder, when ripe, than any other.

The SMALL BARREN PINE.

THE Leaves of this very much resemble a Pine. From the Middle of these, instead of a Pine-apple, grows a woody Stalk rising to about three Feet high, and divided into many Branches. These are almost intirely
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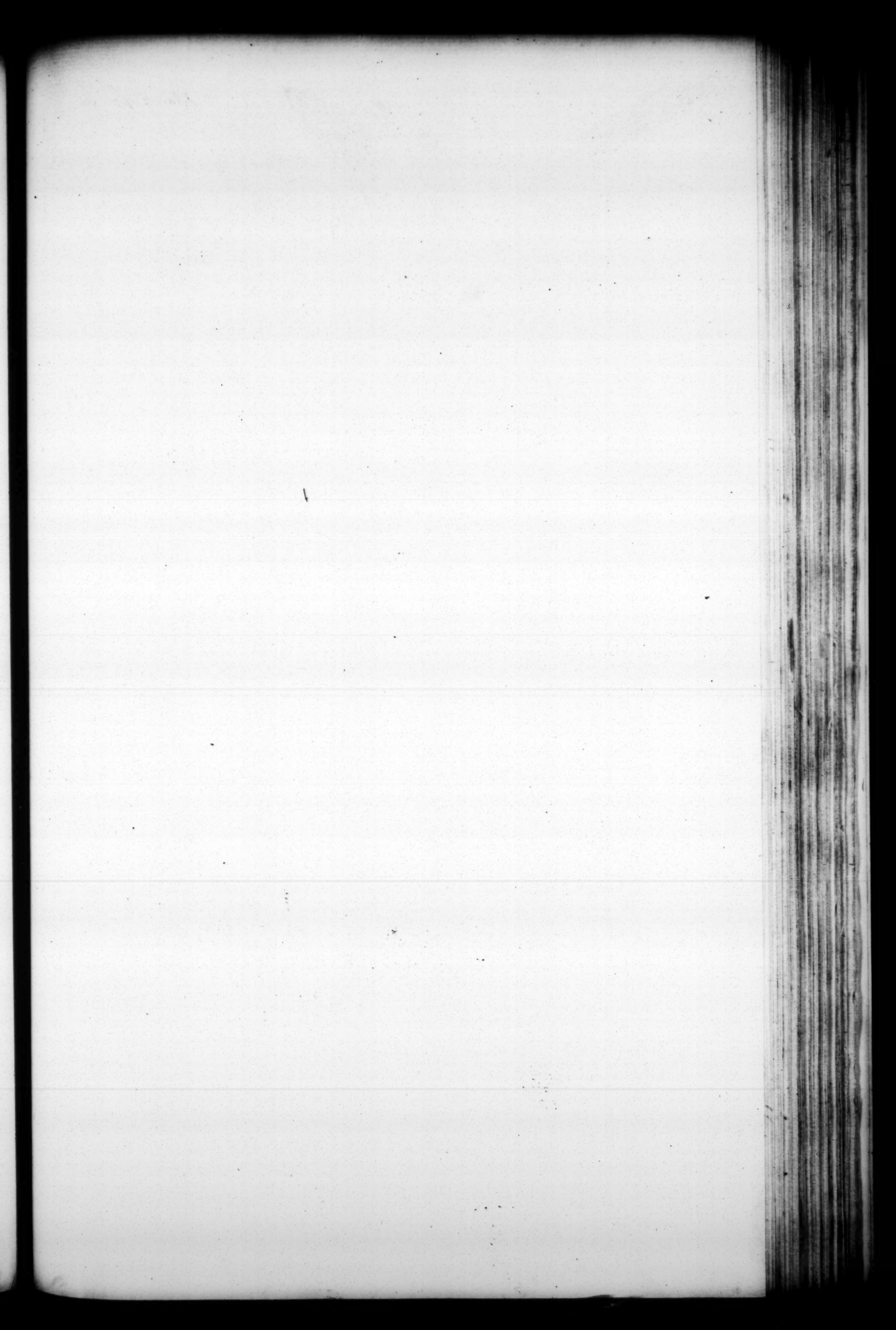
covered with small red sharp-pointed Berries, each guarded at the Stalk with a fine sharp Prickle, and at the Top with two somewhat less.

The PEN-GWYN; Lat. Karatas.

THE Word *Pen-gwyn* is evidently a Celtic Word, compounded of *Pen* an Head, and *Gwyn* white; but how this Fruit came originally to have a Celtic Name, is foreign to my present Purpose to inquire into. The Outside of this Plant is composed of some Scores of hard stiff green Leaves growing to about nine Feet high, and two Inches in Breadth, having their Sides or Edges guarded, at every Inch and an half Distance, with sharp-hooked Prickles. These Leaves turn very scoopingly inward on the upper Side, by which means they save and convey the Dew, and the Rain, that fall upon them, to the Roots. They grow likewise almost impenetrably thick near the Earth, surrounding and guarding a circular *Corona*, or Bottom, of about a Foot Diameter. From this grows a Cluster of Fruits, each of about four Inches long, and one in Breadth, both Ends being sharp-pointed, and the Middle of a quadrangular Form; by which means they are so closely joined, that they cannot well, until very ripe, be taken asunder. The outward Covering of this Fruit is a smooth whitish yellow gramineous Husk; this covers and peels off from a white pulpy Substance, wherein are innumerable small flattish black Seeds. This, being the eatable Part, hath some small Resemblance, in its Flavour, of the Pine; and is looked upon to be cooling and wholesome. If any of these, when near ripe, are gnawed by Rats or other Vermin, the wounded Part will emit Drops of the most transparent Gum. This Coagulation shews, that its Juices are much impregnated with volatile Oil. Dr. Towne very justly recommends the Use of this Fruit in Fevers, provided it be used very moderately; for by its grateful and active Sharpness it is capable of penetrating through the most tough and tenacious Scurf, by that means uncovering the Orifices of the Salival Ducts, and enabling the Glands of the Mouth and Throat to discharge the Contents, which could not be done before the Impediment was removed.

The GROUND-NUT; Lat. Arachidna.

THIS differs very little from that called in *England* by the same Name. The Nut, which is the Root of the Grass, lies three Inches deep in the Earth. This is no bigger than a black Cherry covered over with a russet Skin, or tender Bark, the Inside being as solid as the Kernel of a Hasel-nut, and well-tasted.





To the Right Hon.^{ble} L^d
Viscount COBHAM,
This Plate is humbly Inscrib'd.
&c.

The GINGER; Lat. ZINZIBER.

GINGER is rather of the Reed-kind, than of the *Iris*, as *Morrison* and others would have it. Its Stalk seldom exceeds eighteen Inches in Height, from whose Side grow, in an alternate Order, four or five narrow sharp-pointed gramineous Leaves, of about five Inches long, the Extremity of the Stalk ending in a soft-pointed Spine. When the Plant is dug up, its Roots are those flattish digitated Races called *Ginger*: These Races are scraped clean, and Sun-dried. It would be needless to describe the Qualities of a Root so well known: I shall therefore conclude the Description of it with observing, that the usual time of planting it is in *May* and *June*; and of digging it up, in *February* and *March*. What is most remarkable in this Plant is, that the small or Seed-Ginger, when planted, doth not decay in the Ground, as almost all other Seeds or Plants do: For though it produces the Plant, and the several Races at its Root, the first Year; yet it remains itself uncorruptible, and may the next Year be planted again as a Mother-plant, and so on the succeeding Year. However, after such a time, it becomes so far exhausted of its prolific Virtue, that it bears but a poor Crop: Therefore the most general Custom is to plant yearly with fresh Suckers, or the smallest Races of Ginger. The Land intended for this Plant must be very richly manured.

The SEA-SIDE LAUREL.

THIS beautiful Shrub grows generally near the Sea-side, cloathed with numerous Leaves. The Edges of these are remarkably indented. This is delineated in Plate XXII.

The LARGE DUCK-WEED.

THIS always grows in Ponds of standing Water, and generally covers their Surface with its broad Leaves, and much resembles in Shape and Texture those of the Water-Lily in *England*. Their upper Side is of a smooth shining yellowish Green, the under Side of a very dark Purple: Their Veins and high Ribs are tinged with Yellow; and their Footstalks are round, smooth, and of the same Colour. The Inside of this is perforated into many longitudinal Pipes, and its Length is in proportion to the Depth of the Pond; for it always grows till its Roots penetrate the Mud, or other Sediment, in the Bottom.

The Flower likewise, which is similar to those of the same Kind in *England*, always opens at Break of Day, and closes as soon as the Sun appears.

The SMALL DUCK-WEED.

THIS hath many long stringy mossy green Roots. The Plant, spreading itself upon the Surface of the Water, is composed of several round-pointed Inch-long Leaves, of a greenish-white Colour, and regularly veined towards their Extremities. The Stalk, as well as above the first half of the Leaf joining to it, is bagged or stuffed in the Inside of near one fifth Part of an Inch thick: This, when cut through, is full of small longitudinal Veins, or open *Tubuli*. From that Part to the Extremity the Leaf assumes its thin proper Texture.



C A P I L L A R Y

A N D

PARASITICAL PLANTS.

The AGNUS SCYTHICUS.

WE are now come to treat of a Plant of the parasitical Class, tho' dignified with the Name and Quality of an Animal, which (if we believe many Writers of Wonders) hath not only the Shape of a Lamb, and is woolly, but likewise feeds upon the adjacent Plants. To increase the Wonder, it is said, that, if these are removed, the Lamb soon after dies.

This, and many other surprising Qualities, are attributed to this supposed Animal, which the *Tartars* strongly affirm to exist; yet conceal the Place where it is found. However chimerical this may appear, and in reality is, yet the otherwise judicious *Kempfer* was so credulous, as to spend a great Part of his Life in Search after it; tho' a moderate Attention to the Motives of his Credibility would have spared him his laborious Search: For there is not a more suspicious, or even a surer Sign of Craft, or Cunning, and of an intended Imposition upon the Credulity of Mankind, than a sedulous Endeavour to keep any pretended Discovery of this Kind from the Inspection of the Public. What byassed human Nature to embrace low Art and Cunning, in Exchange for that true Wisdom, and best of Policy, undisguised Truth, was, and still continues to be, that groveling and sordid, yet almost universal Passion, the Love of Gain. In the following Instance we shall find, this Vice is not only the Attendant of luxurious *Asia*, or the effeminate Part of *Europe*, but that it reigns even among the rude unpolished *Tartars*, whom Luxury, one would have imagined, had not made Slaves to its unnecessary Wants. However, we find that these, like the *Ephesian* Coppersmith, are artful enough to secure their own Gain; for, as Furs are in great Esteem, and in high Value, among the Nobility of *Tartary*, and the neighbouring *Turks*, the near Resemblance of the Down growing upon this Plant, to the Wool of a very young Lamb, afforded the cunning *Tartars* room to impose upon the World, and gave Rise to that barbarous Piece of Cruelty of privately ripping up the Ewes, as soon as the Lambs had attained to the Maturity

O o o

of

of having any Wool upon them; the Skins of which, being then delicately soft, these cunning Dealers substitute in the room of, and call them, the Skins of this supposed *Scythian* Lamb.

But, to return to my Subject; to prove that most of, if not all, the pretended Qualities attributed to this Lamb, how speciously soever they are applied to it, as a strange Mixture of a real animal Existence, and vegetable Appearance, are really and truly the inseparable Properties of this, as well as many other parasitical Plants. However it must be owned, that this is the most surprising of any of this Class, and is as rare as it is curious.

As to the Proof of its supposed animal Life from its dying, as they term it, if the adjacent Vegetables are taken away; this is literally true of its Decay as a Vegetable, as all other parasitical Plants will do, when deprived of that fostering Nourishment, which they draw from the Trees they prey upon. For Instance, if a Branch of an Oak, which hath the Mistletoe growing upon it, decays, the latter, which before lived and flourished by the Juices it received from the Oak, must, when this becomes dry and arid, decay likewise with the decaying Branch. In the same manner, if the Tree, or even the Branch of it, from which the *Agnus Scythicus* receives its Nourishment, is cut down, it must also perish with it.

The Body of this Plant is about the Thickness of one's Finger, and many Feet in Length; the Inside of a white close Substance, somewhat juicy, and easily cut thro' with a Knife. The outside Rind is tough, and deeply covered with a fine silky Down, somewhat resembling Wool; and the Body of the Plant is here-and-there irregularly geniculated, having, among so many Bendings, some, which distantly resemble, in Make and Bigness, the Legs of a young Lamb; especially as it is covered over with a fine silky Down, or Hair, somewhat curled. This accidental Likeness of Shape and Covering it was, that gave Rise to the Notion of its being a Lamb; and lucrative Reasons may have help'd to keep it up. The Body of this Plant wreaths itself in several loose irregular Foldings about the Body of a Tree, and with its several slender, ligneous Roots penetrates thro' the Bark, and from thence sucks those Juices, which ought to nourish the Tree. From the Extremity of the Stalk rises a Footstalk of about twenty Inches long, supporting a single cylindrical Leaf, very near of the same Length. The Back of the Leaf, on each side the middle Rib, is slightly and regularly pitted into a great Number of depressed Spots: In these are seen a great many very small yellow Seeds, which, when ripe, are carried off by the Wind; and if they fall upon any neighbouring Tree, as some, among such a Number, unavoidably must, they then, especially if the Bark of it proves sulcated, take Root, and are thus propagated.

The FERN-LIKE PLANT.

THIS grows to about fifteen Inches high, and is by far the most beautiful of the Fern-kind; its many Side-branches jutting out alternately in a very elegant Manner. I found this Plant growing in the Estate of Mr. *Straban*, in *St. Andrew's* Parish.

The MOUNTAIN-FERN.

THIS grows to often twelve or fifteen Feet high, very much, in its Shape and Texture, resembling a Fern; its Root cover'd with a reddish Down. I found this near the Estate of *Benjamin Mellowes*, Esq; to whose Skill, and communicative Temper, I owe the Discovery of many Plants.

The BLACK MAIDEN-HAIR.

I Found this beautiful Plant growing upon the Wall of *St. Lucy's* Church.

MAIDEN-HAIR.

THIS is generally found growing on the Side of shady Cliffs, Sides of Wells, and other old Walls: It is thought to be a good Pectoral, as most capillary Plants are; and therefore it is gathered, and, with Sugar, boiled into Syrup, and made use of.



GRASSES, REEDS,

AND

GRAMINEOUS PLANTS.

Of GRASSES.

IT is no small Instance of *God's* Wisdom and Goodness, that the Face of the Earth is covered with Grass, for the Use of Cattle; and that its Verdure should, above all other Colours, be most grateful to the human Eye. The Variety likewise that is observed in their different Species, affords infinite Use and Amusement. Reeds and Rushes cover with a beautiful Green the otherwise disagreeable Surface of a miry wet Soil, and, by their numerous Roots, prevent its being washed off by Floods. It is in these, that several Kinds of Birds, such as Coots, make their Nests; and among these likewise they find their Food, and are, whilst feeding, shelter'd from the Sight of their Enemies. If we ascend up the Hills and Mountains, there the Carpet-Downs open to our View, and, with their wide Extent and Verdure, yield an innocent Delight; and if the steep Sides of Hills were not cloathed with Grass, the narrow intermediate Valleys would be scorched up with the reflecting Rays from their opposite stony Surface.

The STAR-GRASS.

THIS is the most remarkable of any of the Grass-kind. Its Roots are many and fibrous. The several Stalks join there together, as in a Bunch of Scallions. The main Stalk rises about fourteen Inches high. This is small, round, and solid; surrounded, within two Inches to the Ground, with several slender narrow gramineous Leaves. From thence upward the Stalk rises in an upright Spire, which, at the Top, spreads into seven other grassy Leaves, standing almost horizontally round a Tuft of small whitish Seed-vessels, containing a great many small black Seeds. These Leaves are remarkably stained, or, as it were, enamel'd on the Inside with a clear White for near an Inch long; the Remainder of the Leaf is perfectly Green. They are in their Bloom in *June* and *July*; but this white Part is not a transitory Embellishment, but is as permanent as the Leaf.

DUTCH

DUTCH GRASS; Gramen dactylon procumbens.

THIS hath but few Roots at its Appearance from the Ground. It is divided into many low Branches, each thickly cloath'd with narrow sharp-pointed Leaves, each main Stalk ending in two or three angular almost horizontal Spears, bearded on one Side with sharp-pointed small capfular Seed-vessels. This Grass is much coveted by Cattle of every Kind.

POND-GRASS, or CANKER-WEED.

THIS is a succulent jointed Grass, with sharp-pointed gramineous Leaves. The main Stalk is jointed at every four or five Inches, and as it creeps along the Ground, there sprout, from each Joint, two white strong Roots, which soon penetrate into the Earth; and by this means it is too successfully propagated, to the great Prejudice of the Planter. It is said to be of so corrosive a Nature, that a Cataplasm of this bruised Plant, steeped in Urine, will eat down any Malander, or such-like fungous Excrescences. It is further supposed, or rather believed, that, if the Juice be given to a breeding Sow, it will make her absolutely barren. This Plant grows best in wet marshy Land.

SAVANNAH-GRASS.

THIS is a long creeping Grass, full of Joints. From each Joint rises a grassy sharp-pointed Leaf, and, as it creeps along the Ground, it shoots Roots from each Joint, and so propagates. It grows to a great Length.

RICE-GRASS.

THIS Grass grows to about two Feet high. Its Roots are many and white. The main Stalk is somewhat flat, sending out from its Sides several Leaves alternately: These are grassy, and about five Inches long. The main Stalk ends in two opposite Leaves. From the Centre of these rises a two-inch-long Spear, on whose Side alternately rise several triangular Races, composed of several Seeds. This is much coveted by Cattle of every Kind.

The PLUSH-GRASS.

THIS Grass seldom grows above a Foot high, decorated near the Root with many narrow spoon-like blunt-pointed Leaves; the Spear continuing naked from these Leaves for several Inches; but decorated at the Top with several small Pannicles, set round the Stalk circularly, ending in an umbilical Form; each Division of this Pannicle

cle being bearded with a fine white Down, at whose Root lie the small capfular Seed-vessels. The green Leaves near the Ground are slightly cover'd with a very soft light-colour'd Pile.

FLAG-GRASS.

THIS hath but few Roots. The main Stalk is jointed near the Ground at every two or three Inches asunder. The grassy Side-blades are sharp-pointed, and near eight Inches long. As these grow no higher round the Stalk than about eighteen Inches, the remaining Part of the Stalk, which is generally two Feet more in Height, continues unjointed; its Extremity ending in a five-inch-long white Pannicle, whose numerous small capfular Vessels are thickly studded with very fine white Down.

SCOTCH GRASS; *Lat. Gramen panicum.*

THIS very useful Grass grows in swampy wet Places. Its Roots are fibrous and many. The main Stalk grows in Joints, at three or four Inches asunder, rising often to five Feet in Height. Its Side-leaves are many and grassy. Its quick Growth, and always thriving in such wet Places, makes it very valuable in the dry Time of the Year, when other green Fodder is scarce. Cattle of every Kind prefer this and Rice-Grass to any other. The Method of producing it is to cut it in small Pieces, leaving always a Joint to every Piece. These are stuck in, at eight Inches distant, round the Sides of Ponds, or other wet marshy Land; and will not only soon grow up themselves, but propagate others, and consequently grow prodigious thick. This may be several times cut down, and another renewed Crop be in a few Weeks reaped again.

DWRAH, or AMMADWRAH.

THIS is of the Rush-kind. Its Root, which hath a very strong Smell, is often steeped in Water, and mingled with the Juice of the Musk-bush. With this the *Coramantee* Negroes anoint their Skin by way of Perfume, especially when they are to go to their Merry-meetings, or public Dances.

POND-WEED.

THE Roots of this Plant are many, white, and stringy. The main Stalk is as thick as one's little Finger, strong and hairy, growing to about two Feet high. Its Leaves, which are set on alternately upon short Footstalks, are near four Inches long, and scarce one broad, sharp-pointed, and their Edges irregularly serrated. The middle Rib, as well as the Side-ones, are very regular and prominent, which makes the opposite Side of the Leaf deeply furrowed.

Dog's-

DOG'S-GRASS.

THIS derives its Name from common Observation, that Dogs, when sick, often eat of this Grass, which soon after clears their Stomachs by its emetic Quality. This Grass is so well described by Mr. *Miller*, in his *Botanicum Officinale*, that it would shew more Impertinence than Judgment to give it the Reader in any other Words. "Dog's-Grass hath many long slender creeping Roots, white and jointed, spreading much in the Earth, with small Fibres at every Joint; from which arise several tall Stalks, not so thick as the Stalk of Wheat, having two or three Joints, and as many long somewhat broad Leaves, one at each Knot or Joint: On the Top of each Stalk grows one long spiked Head, in Shape like an Ear of Wheat, but somewhat flatter, consisting of two Rows of chaffy Glumes." It grows in most Parts of the Island: And a Decoction of it is looked upon to be good against the Gravel.

The WILD-DWRAH.

THIS hath an hard bulbous Root, its grassy Stalk, which is green and triangular, seldom rising above seventeen Inches high. It regularly branches near the Top into a Star-fashion, generally into three or four grassy Leaves; from the Centre of these rise two or three Spikes, cover'd at the Top with a coarse Flag, like that of a Reed.

The NUT-GRASS.

THIS is of two Sorts, the one intirely propagating its Species by its Seed, the other by its numerous Nuts or Roots. The former is less prejudicial to the Planter, tho', both by its very quick Growth and Increase, it is of great Disservice, by preventing, or, at least, by sucking up, the Nourishment of the Manure from the planted Canes, or Corn, as well as, by its thick Growth, choking them with their numerous wreathing Roots. This was first brought here in a Pot of Flowers sent from *England*, to Mr. *Lillington* in *St. Thomas's* Parish: From thence it hath been more or less unluckily propagated throughout the whole Island.

RED-FLAG, or PLUSH-GRASS.

THIS grows to the Height of the last-describ'd, and every way resembles it; except that its Pannicle is longer, and of a deep-red Colour, surrounding the Extremity of the Stalk in a circular Manner; each capsular Seed-vessel guarded with half an Inch long soft-pointed Bristle. Neither this nor the former is eaten by Cattle, unless in great Want.

The GINGER-GRASS.

THIS is called Ginger-Grass, from the great Resemblance there is between the Leaves of this, and the Flags, or spire-like Leaves, of Ginger.

WYTHS

W Y T H S and V I N E S.

The BLACK BASKET-WYTH.

THIS is perhaps the strongest of all other Wyths, or of any Vegetable of equal Bulk: It is of a blackish Colour, seldom growing thicker than one's Finger. It derives its Name from its Use in making Baskets; for which Purpose its great Strength renders it very serviceable. If these grew in *Palæstine*, we may be allowed, at least, to conjecture, that they were the same with which *Samson* was bound; for we know of no other Wyths of sufficient Strength to be worthy of an Experiment of that Nature.

The COW-GUT-WYTH.

THIS is a scandent Vine, bearing Yam-like Leaves; the Flowers are of the Bell-fashion, and yellow. I never could observe, that the Flowers were succeeded by either Pods, or Berries. The Wyth itself is very strong and pliable; therefore made use of to tie the Blade of Canes, wherewith *Negroes* thatch their Houses.

The HONEY-WYTH.

I Have given this Wyth the above Name, from its sweet fragrant Smell, or rather from the great Resort of Bees to its Flower.

The PUDDING-WYTH.

THIS much resembles, in its Leaves, those of Yams: They are chiefly made use of as Bandages to tie Bundles of Straw or Rushes, with which the poorer Sort of People thatch their Houses.

The Wild YAM-VINE.

THIS hath its Name from the great Resemblance its Leaves have to Yam-vine-leaves. As it is tough and ligneous, it is made use of to make Baskets.

The WILD VINE.

THIS is of two Sorts, each bearing a monopetalous Flower, expanding horizontally; one of a pale White, the other equally chequered with a sky-coloured Blue: These are small trailing Vines, creeping over shrubby Trees, having heart-like Leaves.

The HOG-VINE; Lat. Convolvulus.

THIS is a creeping Vine, with a green hairy Stalk. From each Side of this Stalk rise a great many Pedicles, of above an Inch and an half long; supporting, on their respective Summits, four or five sharp-pointed Leaves, about an Inch and an half long, and an Inch broad. These spread horizontally regular round the Tops of the Footstalks. The Flowers, in general, are four in Number, yellow, and of the Bell-fashion, whose *Ore* are much expanded: These are succeeded by as many brownish *Capsule*, each inclosing small Seeds.

The SWEET VINE.

THIS Vine, at some Distance from it, perfumes the Air with a very fragrant Smell; but the nearer you come to it, the less agreeable, it being then faint, if not offensive. The Stalk affords a great Quantity of milky clammy Juice. The Leaves are small and blunt-pointed, and the Flowers small and white.

The SEA-SIDE VINE; Lat. Convolvulus marinus.

THIS is a luxuriant trailing Vine, creeping along the sandy Banks near the Sea-side. Its Stalk is long and succulent, cloathed with middle-sized smooth shining-green Leaves. Intermixt with these appear several large bell-mouthed Flowers, of a pale White without, and a deep Purple within. As it grows chiefly upon the Sand, its continued Verdure is very agreeable, and covers it; and by so doing prevents the Reflexion of the Sun from the hot Sand, which would otherwise be very prejudicial to the Eyes of those Travellers, whose Business requires them to use such Roads.

The SILVER VINE.

THIS is a weak creeping Vine, valued chiefly for being very good to feed Horses with. It derives its Name from a shining whitish Hoariness upon the upper Side of its Leaves. Its Roots are many and fibrous. It grows chiefly in Gullies, and other such shady Places.

The WILD PURSLAIN.

THIS is of two Sorts, the Red and White, each being a creeping small-jointed Plant: They emit from each Joint many small fibrous Roots; the small upright Branches bearing narrow green Leaves of a long oval Shape. Each Sort bears a scaly conic clover-like Flower, differing only in their respective Colours, which are red and white: The white Sort, boiled to a Decoc-tion, makes a good Gargle for sore Mouths. It grows chiefly by the Sea-side.

The POISON-WYTH.

THIS grows to a great Length, and is, tho' woody, yet of a very spongy Nature. The Leaves are about two Inches long, and at the Stem near an Inch and a Quarter broad. The Root, when pounded, and applied by way of Cataplasm, is of a very drawing Nature; and therefore it is often used to ripen Boils and Tumours. Its Flowers are succeeded by Berries, black when ripe.

The RIGHT-WYTH, or the CATS-CLAW-WYTH.

THIS is a ligneous strong Vine, creeping upon the neighbouring Trees or Rocks to a very great Height. The Leaves on the upper Side are of a dark-green, sharp-pointed, standing in Pairs upon one common inch-long Footstalk; each Pair opposite to one another on the lesser Stalks. From the Bosom of the Leaves rise numerous small Claspers, or Tendrils: These not only cling round any neighbouring Supporter, as the Grape-Vine does; but, at the Extremity of each Clasper, it is fenced or provided with a forked Claw like a Fish-hook, but somewhat more lax in the Bending. This ends in a sharp prickly Hook or Talon, by which it can not only take hold of, but pierce into, the tender Bark of Trees, as well as fasten to the Cavities of Rocks. It bears a yellow Flower, but never visibly succeeded by Pods, or Berries. Its grateful Verdure, and being thickly covered with Leaves, affords an agreeable Shade all the Year.

The RIGHT-WYTH.

THIS scandent Wyth is an Evergreen, bearing upon its Stalks several deep-green Leaves, set on in a Triparture-order, issuing from the several Joint, which are many in Number. These Wyths, when full-grown, are, near the Ground, as big as one's Arm. Their Branches have many Claspers or Tendrils, by which they climb up any neighbouring Tree, growing so thick, that it makes a very dark, cool, and agreeable Shade.

The SUGAR-CANE; Lat. Arundo Saccharifera.

AS it would be more curious than requisite, to examine the several controversial Opinions, whether Canes were originally the Growth of the *East* or *West Indies*; I shall therefore proceed to observe, that in the Manner of their Growth, Form of their Flags or Leaves, and Make of their * Pannicle, they resemble the Reeds which grow in wet marshy

* There are but few Canes, especially if they grow in a deep Soil, that shoot out into an Arrow decorated at the Top with a Pannicle; and those that do, grow generally in a shallow Soil; tho' the Glumes of their Pannicles contain a whitish Dust, or rather Seed: Yet these, being sowed, never vegetate.

The most natural, and perhaps the only proper, Method of producing Canes is by Suckers, or, as Experience shews, with the tender Tops of old Canes: These being cut into Pieces of about a Foot long, and planted in Holes of about six Inches deep, and two Feet wide, and covered with good Manure, each Piece will produce from its Roots a great Number of Canes.

Grounds in *England* or elsewhere ; however, with this general Difference, that the Sugar-Canes are every Way far larger ; and the Inside, instead of being hollow, is full of white Pith, containing a very sweet Liquid. The intermediate Distance between each Joint of a Cane is of different Lengths, according to the Nature of the Soil, Richness of the Manure, and seasonable Weather during their Growth ; but in general from one to four Inches long, and from half an Inch to an Inch Diameter, seldom more. The Length of the whole Cane likewise depends upon the above Circumstances. It generally grows to Perfection in about fourteen Months, its then Height (the top Flag-part excluded) is from three and an half to seven Feet, a Medium between both being the most common Length, even in a very good Soil, and seasonable Years. The Body of the Cane is strong, but brittle, of a fine Straw-colour, inclinable to a Yellow. The Extremity of each, for a considerable Length, is cloathed with many long reed-like Leaves, or Blades, whose Edges are very finely and sharply serrated : And the middle longitudinal Rib in each is high and prominent.

F. Labat, in his History, says, that there were Canes in the Island of *Tobago*, of twenty-four Feet in Length : If he meant this in general, his Assertion is a strong Specimen of that Vanity, to say no worse, which influences many Writers to be fond of Relations of the marvelous Kind. But whoever judges of the Length of Sugar-Canes, in general, from these Instances, if there were any such, may as reasonably conclude from the Height of one *Goliath*, that the *Philistines* were in general of a gigantic Stature.

Whatsoever Difference some Soils, and very seasonable Weather, may occasion in the Growth of this Plant ; yet in this all Writers agree, that it is (unhappily for the Planter) liable to one Disorder hitherto incurable, that is, the Yellow Blast.

This, among Diseases peculiar to Canes, as the Plague among those which happen to Men, too justly claims the horrible Precedence.

And as the Ingenious in this Part of the World have not as yet agreed in their Opinions about the Cause of this destructive Blast, I may without any Apology (I hope) offer my own ; *i. e.* That it proceeds from Swarms of little Insects, at first invisible to the naked Eye ; and as the Juice of the Cane is their proper Food, they, in Search of it, wound the tender Blades of the Cane, and consequently destroy the Vessels. Hence the Circulation being impeded, the Growth of the Plant is checked ; and soon after it withers, decays, or dies, in proportion to their Degree of Ravage.

From this Supposition we may easily account for the various Phænomena, which attend the Blast, whether in its first Appearance, or its further Progress. It is difficult to distinguish the Blast in its Infancy, from the Effect of dry Weather ; the Appearance in some Instances seems to be alike : However, the first seasonable Rain manifests the Difference ; the uninfected Plant reaps the Benefit of it, thrives and flourishes with great Vigour ; whilst

whilst the infected, being made more soft and tender by the Rain, becomes easier to be pierced by the devouring Worms. At such and other times, there are often seen, on the Blades of such sickly Canes, many small protuberant Knobs, of a soft downy Substance, often containing in them small white Maggots, which, I believe, turn afterwards into small brownish Moths, which are to be seen in great Multitudes among the Blades of infected Canes. It is likewise observable, that such Blades will be full of brownish decaying Spots: These are so many Places, which have been deeper pierced by the Worms.

Multitudes of Ants are likewise seen on the blasted Canes; these are invited hither to suck the Juice that oozes out of the wounded Leaves, especially when the Plant hath attained any Degree of Sweetness. This appears by the Clamminess, that, at such times, covers the Leaves, preventing all Perspiration. In this lacerated Condition of the Plant, the Juices want their natural free progressive Motion upwards; the most subtle and finest Part bursting through the wounded Leaves, whilst the more gross returns back unsecreted to the radical Vessels. By this means they are overloaded, and, bursting, supply the Ants at the Roots with a nourishing Liquid. In this injured Condition the Roots become incapable of supplying the Stalk or Leaves with Nourishment from the Earth, if the latter should ever recover.

The Blast is observed to be most frequent in very dry Years, there having been but little of it when seasonable Rains have begun early, and continued till the Canes were ripe. In such Years, a great many of these Vermin are perhaps drowned by the heavy Rains, as well as their Eggs made less prolific.

It is observable, that the Blast usually appears successively in the same Fields, and often in the very same Spot of Land: It is therefore very likely, that these are but the successive Offspring of Parent Eggs, from time to time deposited there by the small brown Moths above-mentioned. And when the Blast is found in Fields of Canes, far from infected Places, we may, in all Probability, conclude, that the Eggs were conveyed thither by the Wind. What makes this more evident is, that the Infection always spreads faster to the Leeward, or with the Wind.

It is remarkable, that if Canes have been once infected with the Blast, although they afterwards, to all Appearance, seem to recover; yet the Juice of such Canes will neither afford so much Sugar, nor so good of its Kind, as if obtained from Canes that were never infected. I conceive that, in this Case, the delicate Strainers, adapted to secrete the Particles, which constitute the Sugar, have been so much injured, as not to be in a Condition to perform their Offices to Perfection, although sufficient to sustain the Plant alive, and in a seeming Vigour.

* Perhaps the Attendance of the Ants may proceed from two Causes: They may be invited, as above-mentioned, when the Canes have attained some Degree of Maturity by the sweet Juice, which oozes out of the Wounds, as may be perceived by the Clamminess of the Blades; or, if this is not the Case, when the Plant is very young, they may perhaps be allured to prey upon the dead and living Bodies of these little Animals infesting the Canes.

Should it be asked, If this Blast is occasioned by Worms, how comes it to pass, that the adjoining, and often the intermixt Corn and Pulse should be free from it? it may be easily accounted for from similar Instances in *England*, where the small Worms, causing the Blight or Blast, which destroys the tender Buds of Apple-trees, never affects the Pear or Cherry-trees, tho' in the same Orchard; for, in all Probability, neither of these affords a proper Nourishment for them.

Having thus, till better Reasons are offered, shewed the Nature of the Disease, the next Thing necessary will be to look for a Cure.

Hoc Opus, hic Labor est.

Various are the laudable Endeavours to this End, which the Inquisitive in this and the neighbouring Islands have made; but, alas! made in vain: Therefore, as this Disease hath been hitherto of the Number of those which are incurable, and almost literally as destructive to us, and our neighbouring Islands, as the Locusts were to the *Egyptians*; a studious Attempt to remove so great an Evil, will, I dare say, meet with the Approbation of every Well-wisher to our *West-India* Islands; especially since what I have to offer upon this Subject is attended with the strongest Probability of Success: And as it requires very little Expence, and less Labour, I may with more Confidence venture to recommend it to the Public.

When the Canes appear to be first infected, which happens generally when they are young, take an equal Quantity of Brimstone, Aloes, and the Bark of bitter Wood; let these be put in the Middle of a Bundle of wet Straw; the Whole must be put in a Cradle of Wire as large or larger than the Crown of an Hat, made Lattice or Net-fashion; this is to be fastened to a wooden Handle of convenient Length, and kept to the Windward of the infected Bunch of Cane, having first set the inclosed Combustibles on Fire; and holding it there till the thick Smoke hath for some time penetrated among all the infected Blades, and so on to the rest, for a few Mornings and Evenings: This by its very Nature cannot fail of killing those minute Animalcules, as well as destroying those that are in Embryo in those downy *Nidus's* already mentioned. Experience, which is the most convincing of Proofs, gives a strong Sanction to this Method; for we find, that the Smoke of Brimstone, in an inclosed Room full of Flies, pestered with Weevils, will, in a few Minutes, intirely destroy them. If then Weevils, which have a strong scaly Covering, and are grown to their full Strength, can be thus destroyed; how much more probable is it, that such tender small Animalcules may likewise, in the same manner, be destroyed? If it be said, that in the former the Smoke is more confined, it must likewise be considered, that a far weaker Degree of this sulphureous Smoke will destroy Animals of a far weaker Texture, and perhaps of but a few Days old. The Necessity and Use of the other Ingredients of the same Nature are too evident to be further explained.

The Cane-plant being described, and the Diseases of it considered, and a more than probable Remedy proposed, I shall proceed barely to touch on the Method of making Sugar.

The * Canes, when ripe, are squeezed between the iron-cased Rollers of Wind-mills, or Cattle-mills. The Juice thus pressed out is boiled first in a very large Copper or Chaldron, mixed with a very small Quantity of Lime. When this is used in too small a Proportion at first, a little Lime-water may be afterwards poured into the Chaldron. A strong *Lixivium* of Ashes will perform the Office of white Lime, and may be substituted in the room of it; and was originally used, tho' the latter is generally thought to be more efficacious. It is probable, that the Benefits arising from either are, in a great measure, owing to their alkaline Qualities. The Sugar-cane, when ripe, is of all other Plants the sweetest; however, there is a latent Acid still lurking in the Juice; this is apparent by its turning sour, if suffered to remain unboiled any considerable Time after Expression. The Addition therefore of *Temper*, as the Planters call it, being a certain Quantity of white Lime, is necessary to destroy, in a great measure, the remaining Acid, and to form a neutral Salt.

That this is one Use of *Temper*, is plain from the different Quantities of that which are used according to the different Qualities of the Cane-juice: That from unripe Canes, as more abounding with Acids, requires a larger Quantity, as doth that also from Canes too ripe, and tainted: For in the latter the acid Salts, that before were neutralized, seem to be again disengaged, and set at Liberty, as may be discovered by its acid Taste. And indeed many Instances occur in making Sugar, which demand an extraordinary Proportion of Lime; all these betray a Tendency to an Acidity in the Juice: But, when the Canes grow kindly ripe, the acid Particles in their Juice are few; and as the Poignancy of these is inconsiderable, the Juice will consequently require a less Quantity of Lime. There is a further Use in Lime, besides the foregoing; for it suits greatly in cleansing the Liquor.

When the Quantity of Lime is duly proportioned, if the Liquor is put into a Glass, an immediate Separation will follow, the Impurities settling at the Bottom, leaving the clear Juice at the Top: But if there is a Deficiency of *Temper*, the Separation will be imperfect: If it too much abounds, there will be little or no Separation at all.

When the Lime is mixed with the Juice in the Copper or Chaldron, the *Sordes* or Impurities, being no longer intimately united with the boiling Liquor, and being forced about with the Heat of the Fire, are easily entangled in a viscous Substance that is naturally in the Cane-juice; and then rise with it to the Top of the Copper, forming a thick tough Scum.

* If, when Canes are ripe, the Weather should prove very rainy, their Juice, if at that time expressed, will require a far longer Boiling, before it comes to the Consistency of Sugar, than if it had been extracted in Weather moderately dry. However, this Difference in the Quality of the Juice doth not intirely proceed, as it is generally supposed, from the greater Quantity of Water at that time in the Plant, but from the greater Number of newly sprung up Particles, occasioned by the late Rain. These, if soon afterwards expressed, having not had sufficient time to ripen; the Make of their Particles is, as in all Acids, angular, and sharp-pointed, and therefore dissimilar to those ripe ones: They will therefore resist the Heat longer before they are broken, and brought to such a Consistency as to incorporate with the others that are already ripe. From such a Mixture of ripe and unripe Juices, it naturally follows, that the Sugar then made will be neither of equal Consistency nor Goodness with that made in seasonable Weather, and from Canes grown kindly ripe.

This Viscidity is very apparently discovered on the leaden Beds of the Mills, as well as on the wooden Gutters, where the Juice in its Passage deposits it; and its * saponaceous Quality is no less evident in washing the Cloths that have been any ways used in cleaning the Beds of the Mills, or hath any other way been soaked in the Cane-juice.

The Clarification of the Liquor, as far as it is done in the first Copper, is perfected after the more gross Scum is taken off; the remaining Impurity, as the Liquor boils, is skimmed off from the four or five remaining Coppers or Taches, into which the Liquor is successively poured; each of these being gradually less, as they are to contain a Quantity of Liquor still wasting as it boils.

In conveying this to the fourth Copper, it is in its Passage strained thro' a thick Woolen Cloth, where it leaves all the Remainder of its Impurities, that had escaped the Scummer.

After this a light white Scum is taken off; and, when this ceases to arise in any considerable Quantity, and the Liquor, by long boiling, becomes more of a Syrup than a thin Liquid, it is then poured into the first Tache, and from this to a lesser, till it is conveyed to the last. When it hath here attained the due Consistence necessary to become Sugar; it may be asserted in general, that no more than a seventh Part of the Whole remains; which Diminution is occasioned by the Impurities being scummed off, and the watery Particles evaporated.

From this last Stage, whilst of the Consistency of a thick granulated Syrup, it is conveyed into a large Brass Cooler, where it begins, as it cools, to shoot into Crystals, which are the genuine and essential Salts of the Plant. These are forwarded and helped to shoot, by gently stirring the whole Mass; by which means the Air is admitted to every Part, and the Particles of Sugar disengage themselves from the clammy Substance of the Melasses.

If the Syrup be continued longer on the Fire, than is necessary to bring it to a proper Thickness, the Particles of Sugar cannot grain, or crystallize, when afterwards in the Cooler, for want of a sufficient intermediate Fluid; the whole Mass in such a Case being too well united, to suffer the Melasses to separate from it.

On the other hand, if the Syrup hath not undergone a sufficient Evaporation, the Grains or Salts will be larger indeed, but close to each other; Hence several of them being too much separated from their neighbouring Particles, they become too weak to resist singly, and are therefore drained away in the intermediate Fluid, the Melasses. Upon this Principle we may account for the Make of Sugar-candy, whose large Crystals are

* This saponaceous Quality in the Cane-juice is capable of resolving viscid Concretions: It is to this, chiefly, that we may attribute the surprising quick Recovery of those sickly Negroes, who are permitted to drink freely of this Cane-juice when intirely ripe. It is likewise so nourishing, that Slaves have subsisted upon this alone for a whole Week.

Repeated Draughts of it are very efficacious, to remove the Effect of the poisonous Cassado-juice.

From this Juice likewise, when mixed with Water, and fermented, is made a Drink, called the Sugar-Drink. This, tho' it appears muddy, yet is very wholesome and diuretic.

obtained from a Syrup too thin to shoot into Salts capable of uniting close together.

The proper Time to remove it from the Cooler to the Pots or Moulds, is when it hath grained or crystallized; the better the Sugar is, the sooner this is completed: Hence that just, but ill-expressed Notion, that good Sugar may be potted sooner than bad. The Pots or Moulds made use of are earthen, and of a pyramidal Form, containing from eight to thirteen Gallons.

About twenty-four Hours after the Sugar is potted, the small round Hole in the Bottom of each Pot is unstopped, and the Pots put upon earthen Jars containing about four Gallons, into which Vessels the Melasses drain from the Sugar, the latter becoming fit for Exportation in about a Month's time, and sometimes sooner. The Sugar in this Degree of Perfection is called *Muscovado*, which is a Term too well known to want any further Explanation. What is called here clayed Sugar, is brought to that Degree of Whiteness, by making a Batter of the softest finest white Clay mixed with Water: And after the upper Part of the *Muscovado* Sugar in the above-mentioned earthen Pots is dug up, and closely laid on again in a level Manner, or rather somewhat shelving towards the Middle, a sufficient Layer of this Batter is poured upon the Top of the Sugar in the Pot. The Water from this by Degrees gently ouses from the Clay, thro' the Sugar; and when all the Moisture from the Clay is absorbed by it, which is generally done in about a Month's time, another Layer of fresh Putty is laid on, the former old one being first taken away. In about five Weeks after the latter is put on, this becomes dry, and is taken off; and the Water issuing from it meeting with less gross Viscidities than the former, washes the Particles of Sugar clean, and carries away with it those less feculent Impurities. This completes the Work, as far as it is manufactured here; tho' this is brought to a far greater Degree of Whiteness and Perfection in *England*.

Out of the above-mentioned Skimmings, when mixed with a certain Quantity of Water and Melasses, and fermented, is extracted that spirituous Liquor called Rum. And from the great Quantity of Oil in the Cane-juice, which is considerably transmitted to the Rum, proceeds the Excellency of this Spirit, when compared with Brandy: The latter, wanting this Oiliness, stimulates and lacerates the Coats of the Stomach; whereas the former, if first meliorated by Age, and made into weak Punch, and drank moderately, by its Oiliness preserves the Bowels.

Most of our Planters are yearly great Sufferers (especially when they first begin to distil) for want of proper Knowledge how to raise and continue a regular Fermentation in the *Mulsa* intended for Distillation: Yet I imagine, that their want of Success may not only be accounted for, but likewise remedied.

In order to do this with Certainty, we must observe, that no Fermentation can be raised under thirty-six Degrees of Heat, or kept up after ninety;

ninety ; a lesser than the former will not be sufficiently warm to raise an Ebullition, and a greater than the latter dissipates the spirituous Particles too much. Therefore if Experiments were made with a Thermometer in every Distil-house, to fix the certain Degree of Heat, that a well-proportioned *Mulsa* would ferment in, it would be easy, by the Help of this Instrument, always afterwards to ascertain this necessary Degree of Heat, let the Change of Weather be ever so sudden or considerable. For if the Heat proved so great as to exceed that Degree, in which such a well-proportioned *Mulsa* was used in Time past to ferment best, then the Windows towards the East ought to be opened so as to admit such a Quantity of cold Air as would reduce the Heat to a proper Standard.

On the contrary, if the Spirit in the Thermometer sinks below the necessary Degree of Heat, then these Windows ought to be intirely or partially shut up, in order to procure a sufficient Degree of Heat. By this means the Distiller may come to a Certainty, and proceed by Rule, and not by Chance.

If after such Rules, and necessary Cautions, the *Mulsa* doth not ferment, if this happens in the Beginning of the Crop ; such a Failure ought to be attributed to the then, comparatively speaking, sour and unripe Juices of the Canes : For the Juices of these, as well as most, if not all other unripe Fruits, witness that of the Grape, seldom or never ferment well ; because their Particles, in that unripe State, are not sufficiently meliorated by the Heat of the Sun. In such a Case, I am apt to believe, that a greater Proportion of Sweetening, than when the Canes are ripe, should be added to the *Mulsa*.

On the other hand, a disproportionate Quantity of Sweets, as they are oily, will prove too inactive, and will incline the Liquor more to a Rancidity, than Fermentation : Therefore a greater Quantity of Water, and thin returned Liquor, which hath a great deal of Acidity in it, should be added to the Skimmings of Canes that are full-ripe, and consequently very sweet.

As to those who keep their fermenting Vessels in the open Air, or ill-covered under Sheds, their bad Success may be evidently accounted for, by the Inequality of the Heat and Cold they are exposed to.

I cannot conclude the Description of this very useful Plant, without taking Notice of a most surprising Instance of the Effect of some Effluvia, or Vapours that arose from the Mudgeon or Dregs of the Liquor returned from the Still, and which for some time had been reserved in a Cistern.

In the Month of *April* 1743. *Abel Alleyne*, Esq; the then Manager at the Estate of the Honourable and Reverend Society for propagating the Gospel in foreign Parts, ordered one of the Cisterns, which the returned Liquor was kept in, to be cleansed : The Quantity of this thick Sediment in it was not above seven Inches deep. The first Negro Slave who attempted to clean it, was no sooner at the Bottom, than dead ; the

second and third met with the same Fate instantly. A white Person, who was a Workman on the Estate, being near at hand, determined, if possible, to bring them up, imagining they were only in a swooning Fit. To this Purpose he went down to the Bottom of the Cistern, which was about nine Feet deep, and found the Negroes dead: He went down a second time with a Rope, in order to sling it round them, and to bring them up; but he had no sooner reached the Bottom, but a sulphureous suffocating warm Blast took away his Senses, and he was taken up for dead; however, being blooded, though he was for a long time afterwards very sickly, yet he at last recovered. The best Method of dissipating these noxious Vapours is to admit into them a free Circulation of the Air, as well as to pour in, by Gutters, a considerable Quantity of Water. This Plant is delineated in Plate XXIII. Fig. 1.

The DUMB-CANE.

THIS Plant grows to four Feet high, having, at the Top, two green shining Leaves, about nine Inches long; between these rises up a small Spire: The Body of the Plant hath some Resemblance of a Sugar-Cane. From hence, and from the Effects it hath upon Persons who ignorantly taste it, it derives the Name of *Dumb-Cane*; for as soon as any of the Juice is swallowed, the Tongue, Fauces, and Oesophagus, immediately swell so prodigiously, that the Person afflicted cannot speak. It so affects the salival Glands, that it causes an immediate Salivation. If what is thus discharged, hath the same Quality as that occasioned by Mercury, and if the narcotic Quality could be corrected, it might, perhaps, be of great Use in Physic; for it hath been experienced, that several poisonous Plants, whose Juices were properly corrected, and exactly dos'd, have been successful Remedies.

A Physician, who accompanied the Duke of *Albemarle* formerly to *Jamaica*, says, that the Juice of the Dumb-Cane, mixed with a certain Portion of fresh Fat, is a sovereign Remedy in Dropsies, externally used, by rubbing the Part affected with this Ointment.

The REED.

THIS is a slender long grassy Stalk, creeping upon the adjoining Wood, jointed at every six Inches: From these Joints issue several smaller Side-branches, cloathed alternately with long sharp-pointed gramineous Leaves. The main Stalk is hollow; the Side-ones solid. The Flowers are succeeded by several small grisly-grey Colour Grains, like *Guiney Corn*.



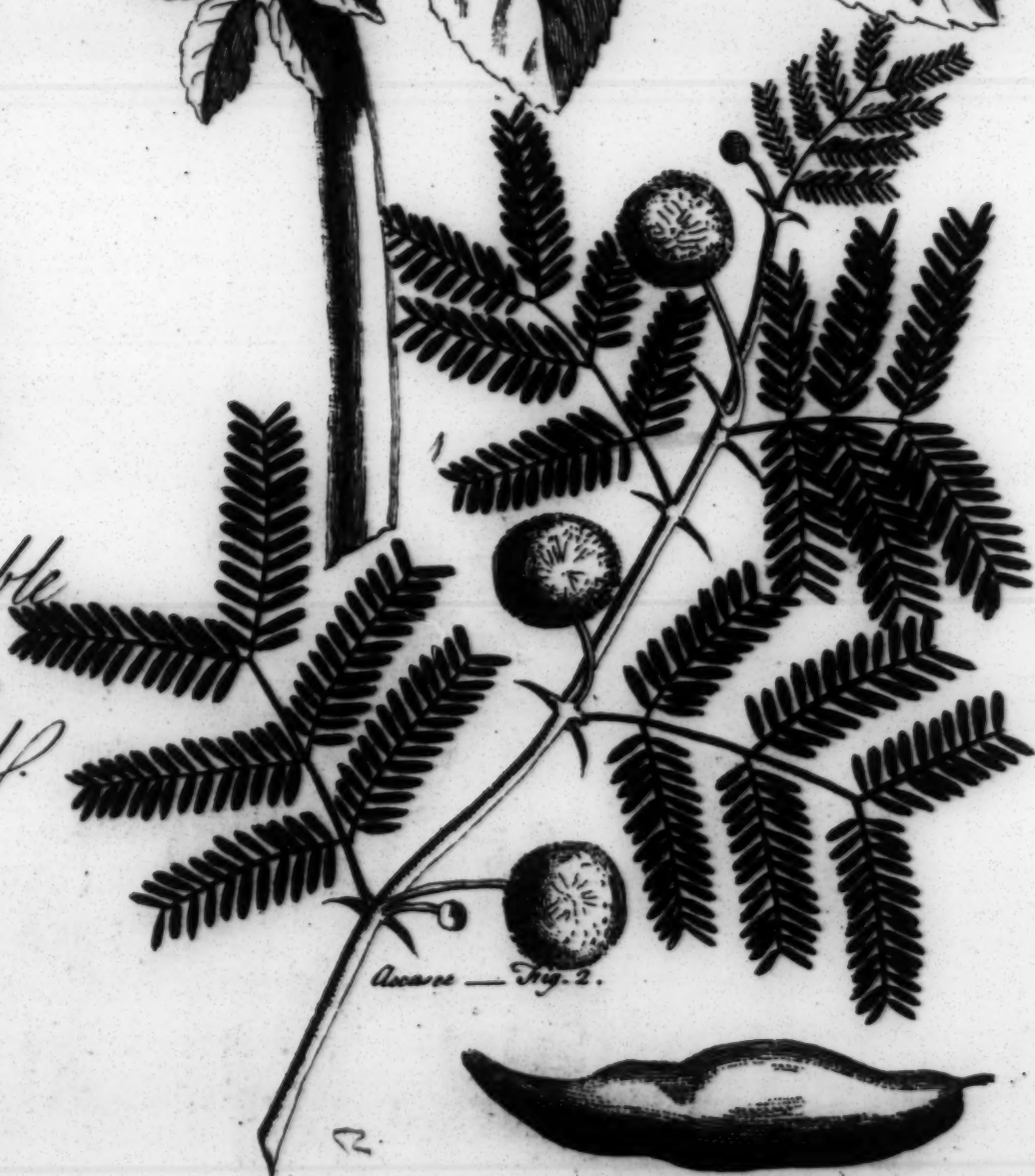
To the Honourable
Coll: Yorke
this Plate is humbly inscrib'd
&c.

Belly Ach — Fig. 1.



To the Right Honourable
 Earl of Macclesfield,
 This Plate, is humbly Inscr'd.
 &c

Acacia — Fig. 2.



1. Labordia zopisipha

O F

GRAMINEOUS PLANTS.

MR. Ray, in treating of the Wisdom of *God* in the Creation, justly observes, that it is no small Instance of his Goodness, that Wheat, and we may add Rye, the most common Corn used for Food, should be the Growth of most Parts of *Europe* and *Asia*. It is likewise no less worthy our Notice to observe, that where the Soil under the Torrid Zones is too hot to produce such, the same divine Wisdom hath appointed other Kinds of Corn to grow and ripen there in great Plenty. Thus in *Africa*, and the *West-Indies*, the Want of Wheat is supplied by *Indian* and *Guiney* Corn. And in some Places, where the excessive Heat of the Climate renders Labour, and the Cultivation of Corn, painful, there bountiful Providence, with an unsparing Hand, ordains Food without Labour, by causing Plantain and Banana Trees to grow in great Plenty; whose Fruit is, by many Persons, preferred to any Kind of Bread whatsoever. It was under the Shade of these that many harmless Nations of *Indians* lived secure, until Luxury taught their more artful Neighbours unnecessary Wants: And successful Tyranny called that a glorious Conquest, which was the Effect of Fraud and Oppression.

The INDIAN CORN; Lat. Mays.

THE Roots of this Plant are many: Its Stalk, which is jointed at uncertain Distances, and within pithy, is strong, and of a Reed-like Substance: It hath likewise several long Reed-like Leaves. The Extremity of the Stalk is decorated with a Tuft of waving chaffy Glumes, which are called the Male-flowers.

From the Side of the Stalk, generally near the Summit, appear the Ears, which are sometimes three in Number: These stand upon short Footstalks, and are inwrapped in sometimes ten or eleven green husky Leaves, the Whole having the Appearance of a long Cone, from whose Summit appears a Tassel of long silky Filaments, each having its Rise from one of the Grains: These are looked upon to be the Female Flowers. The close-folded Leaves prevent the inclosed Grains from the Injury of Weather whilst young, and from Vermin and Birds when ripe; and answer every Intention of a Pod in leguminous Plants. The Ear, which is generally from five to eight Inches long, contains often three hundred Grains, which closely, and in perpendicular Rows, regularly surround a strong chaffy Husk, whose Inside is pithy. This is delineated in Plate XXIII. Fig. 2.

Job's

JOB'S TEARS; *Lat. Lacrymæ Jobi.*

THE Stalk and Pannicle of this Plant much resemble that of the *Guiney* Corn; and their Seeds, which are inclosed in small *Capsulæ*, are about the Bigness of an *English* Pea, and of different Colours. These are strung upon Silk, and used instead of Bracelets by some of the poorer Sort, but especially by the *Negroes*.

GUINEY CORN; *Lat. Miliun Indicum arundinaceum.*

THE different Sorts of this Corn are generally distinguished into that of the Loose-ear *Guiney* Wheat, the White, and the Red, the Loaf, or the Clove-corn. The Stalk of each is a Reed or Cane-like Substance, jointed at about nine or ten Inches asunder, more or less: Its Roots are many and long, closely matted together, and to be seen, some Parts of them, above-ground: The Stalk often grows to eight Feet high, sometimes higher, according to the Richness of the Soil it is planted in. It bears long Reed-like Leaves, gently waving into several Bendings, ending in a sharp Point. The Top of the Stalk terminates in a spicated Tuft, composed of numberless Fibres, each supporting many small Grains of about the Bigness of a Coriander-feed. I have reckoned on one large Ear near four thousand Grains. There is likewise sometimes one, if not two other small Ears upon the Stalks, somewhat below the large one, which terminates the Stalks; however, where these Side-ears are, the main one is generally less. This Grain made into Bread, or otherwise used, is justly esteemed very wholesome. It is with this that the Slaves are generally fed, each being allowed from a Pint to a Quart apiece every Day. This is delineated in Plate XXIII. Fig. 3.





 BOOK IX.

THE several foregoing Books being taken up in considering the Nature of our Land-Animals, Vegetables and Minerals, I shall proceed to make some Remarks on the Shores and its Inhabitants; first cursorily observing, that those are (a few Bays excepted) intirely invironed with high Cliffs, from three to sixty Feet high; which, under Providence, are in a great measure, our Bulwarks against our Enemies, as well as fix'd Boundaries to the raging of the Sea in the Time of Hurricanes.

As far as the Sea in moderate Weather washes them, they are almost one continued Rock from thence upwards; they are in some Places (especially at the North End of the Parish of St. *Lucy's*) somewhat shattered and divided, by Veins of gritty Marl, Earth and loomy Chalk; likewise all the Stones found on the Shores (except a few Flints on a Place called the *Green-Shoal*) are of the *Asterites*-Kind; and the Sand (except in a few deep Bays) seems, in a great measure, to be only Fragments of Star-stones and Corals.

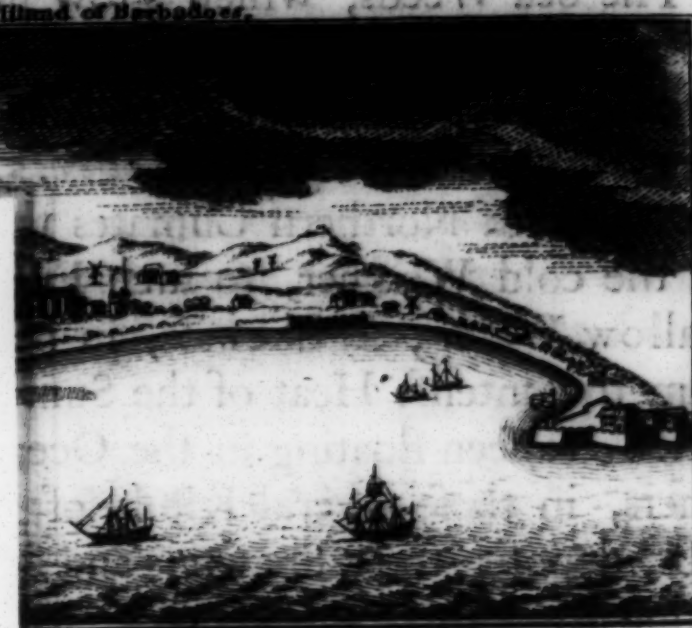
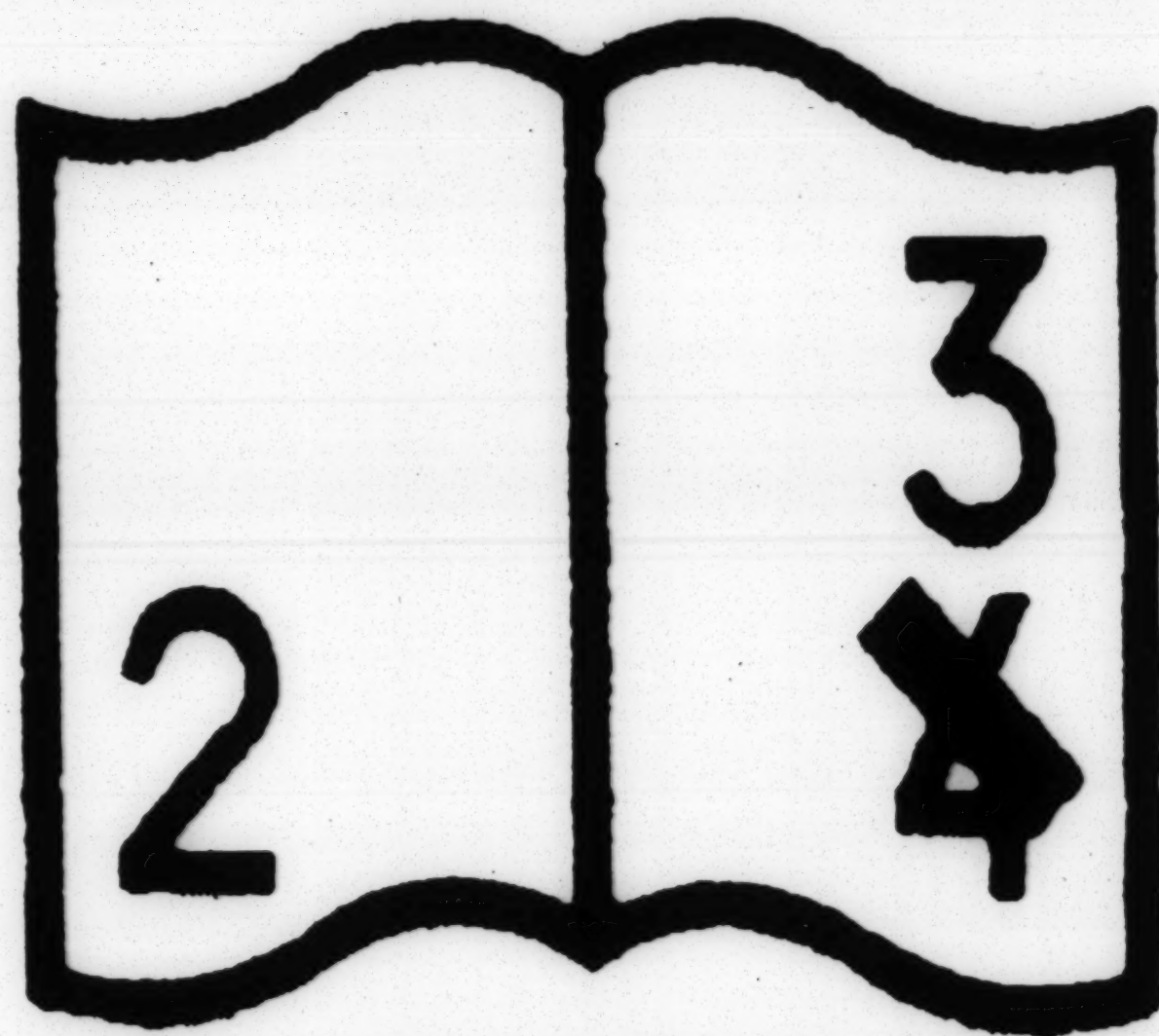
The several Cavities in the Cliffs facing the Sea, are proper Dens for Racoons, and such like wild Beasts. They are likewise a Place of Safety for several Sea-birds to breed in, especially, at a Place called the *Bird-rock*; where are to be seen, at most Times of the Year, a great many of their Nests and Eggs: The young ones are sharp-bill'd, web-footed, and very fat, but taste fishy. The old ones are seldom or ever seen in the Day-time; for they are obliged to range to so great a Distance from the Shore for Food, that they have been seen Scores of Miles from Land; yet they direct their Course, in the darkest Night, with a surprising Exactness, to their respective Nests.

JOB'S TEARS; *Lat. Lacrymæ Jobi.*

THE Stalk and Pannicle of this Plant much resemble that of the *Guiney* Corn; and their Seeds the Bigness of an *English* Pea upon Silk, and used instead especially by the *Negroes*.

GUINEY CORN; *L.*

THE different Sorts of the Loose-ear *Guiney* the Clove-corn. The Stalk at about nine or ten Inches long, closely matted together upon the ground: The Stalk often growing according to the Richness of the Soil, gently waving into the Top of the Stalk terminates in each supporting many small ears. I have reckoned on one large ear sometimes one, if not two below the large one, which ears are, the main one is generally otherwise used, is justly esteemed the best. The *Slaves* are generally fed, a piece every Day. This is



IX.

books being taken up in consideration of Animals, Vegetables and Minerals to make some Remarks on the same; first cursorily observing, that the Island (excepted) entirely environed with high Mountains, which, under Provision of Forts against our Enemies, as well as the Sea in the Time of Hurricanes. When washed them, they are almost barren; they are in some Places (excepted of *St. Lucy's*) somewhat shattered Earth and loamy Chalk; likewise except a few Flints on a Place called Kind; and the Sand (except in a few Places, to be only Fragments of Stars

in the Sea, are proper Dens for them. They are likewise a Place of resort, especially, at a Place called the most Times of the Year, a great number of young ones are sharp-bill'd, web-footed. The old ones are seldom or ever

seen in the Day-time; for they are obliged to range to so great a Distance from the Shore for Food, that they have been seen Scores of Miles from Land; yet they direct their Course, in the darkest Night, with a surprising Exactness, to their respective Nests.

The Sea Weeds, which grow in Plenty near the Shores of this Island, are no less beautiful to the Eye than they are useful; affording Food for several Kinds of Fish, such as the Tortoise, Chubbs, Mulletts, Blue-fish, and the Moss-grooper, &c.

And as in Northern Climates they prove a Shelter from the Inclemency of the cold Weather, to such Fish as are obliged to seek their Food in shallow Water; so likewise, in hot Countries, they equally shelter them from the intense Heat of the Sun. Nor are the large Beds of Sea-Weeds, which are seen floating in the Ocean, without their peculiar Uses; among others, in these several Kinds of the lesser and most helpless Species of Fish, deposit their Spawn; and here likewise they are protected whilst young from their Enemies.

The Variety of these Weeds, especially the soft *Fuci*, growing on the Rocks and Stones near the Shore, are not only curious in their Make, but they are likewise, in all Probability, (were we to know all the Intentions of Providence in creating them,) as many, as useful, and valuable, as the terrestrial Vegetables we are better acquainted with.

Some of them, like Groves in Miniature, extend their numerous Branches to a considerable Distance: Others, like weak creeping Vines, are of so small, soft and delicate a Texture, that they may be intended for Food, to the smallest Animalcules. So that upon the whole, from the little that we do know of submarine Productions, we may justly conclude, that, as the Earth is full of God's Goodness, so is the great and wide Sea.

The BLACK-FRINGED SEA-WEED.

THIS is very finely fringed, and very bushy, especially near the Top. Its several Subdivisions are neatly bearded with infinite Numbers of short, hairy, soft pointed Bristles. Its most substantial lower Branches are thickly studded with several small Berries.

The FRINGE SEA-WEED.

THE Colour of this is generally White, and exactly resembles the Fringe or Border of Cushions: It is found upon almost every sandy Bay.

The WHITE, NARROW-LEAFED SEA-WEED.

THE Roots of this are closely matted together. Its several, thick-set, capillarious, fringy Branches, are divided into lateral, smaller ones; and these again, elegantly subdivided into others, still less; each generally ending in a tripartite Division, and sometimes, tho' rarely, in a white, leafy, broad Point.

The LONG BROWN SEA-WEED.

THIS Moss is the longest of all others, being often above twelve Inches in Length; the main Branches are seldom subdivided into lesser ones; each being thickly cloathed with small oval Leaves, intermixed with brownish Berries. This chiefly grows upon Rocks, at some Distance from the Shore.

The WHITE BROAD-LEAF'D SEA-WEED.

THE Leaves of this somewhat resemble those of a small curled Lettuce, but far more membranously thin; and the Leaves more sinuated and involved in the Foldings of each other.

The PALE-GREEN SEA-WEED.

THIS grows into a Cluster of thin, flat, pale-green Leaves, divided sideways into many Branches, each terminating in a blunt, forked Point.

The CORAL SEA-WEED.

THIS extends itself from the Rocks, in a long, naked Stem, of a brown yellowish Colour, in Substance near as thick as a Raven's Quill; each, at its Extremity, divided into a Group of many blunt-pointed Divisions.

The BROWN HEAD-LEAF'D SEA-WEED.

THIS grows in a thick Bunch; the Leaves, as they grow, widen; and, towards the Top, divide into five or six deep round-pointed Sections.

The FINE, WHITE SEA-WEED.

THE Branches of this are very small, and all over hairy: I have found this Sort growing upon the Sea-Cliffs, near a Place called the *Spout*, in St. *Lucy's* Parish: There is likewise a black Sort, which differs from this only in Colour, as well as a dark green similar to it. This, as it grows, becomes a stronger Plant, and expands into Branches, resembling, in Miniature, a Deer's Horn.

The NEW-ENGLAND, or RIBBAND SEA-WEED.

THIS resembles a Half-inch-wide green Ribband, and is about two Foot long; it is generally to be found in deep Water.

The RUSSET NARROW-LEAF'D SEA-WEED.

THIS grows in Bunches, upon one common Foot-stalk; its Branches, which are about two Inches long, are flat, and laterally divided into many others, ending generally in a blunt, forked Point.

The FEATHER SEA-WEED.

THE Roots of this are long, and creeping, having several upright, single Stalks; these are about four Inches high, each exactly resembling a small blunt-pointed Pen-feather, whose Plumes are wet, and separated: These are in general, of a dark Colour.

The SEA-JEWS-EARS.

THESE are thin and pellucid; of a semioval Form, growing upon loose Stones and Rocks.

The ORANGE-COLOUR SEA-WEED.

THIS seldom grows above four Inches high, is of a fine bright Orange-colour, and very much resembles a small, thick-branch'd Tree, in Miniature.

The BLACK BRANCHING SEA-WEED.

THIS divides into many upright freight Branches, each forked at the Top.

The KNOTED SEA-GRASS.

THIS is by far less pliable than the last described, and about as slender as a strong Horse-hair, the whole being seemingly knoted, the intermediate Space being very small.

The PALE-YELLOW SEA-GRASS.

THIS is of a fine, soft, filky Texture, growing upon old Logs of Wood under Water, and hanging wavyly in it.

The SHORT PURPLISH SEA-MOSS.

THIS is seldom above an Inch long, and generally grows upon the Extremity of a pendent Rock or Stone.

The PALE PURPLE SEA-WEED.

THIS very beautiful Weed grows like a Tree in Miniature; it is very full of Branches, and the Whole transparent.

The CARBUNCLE.

THIS is a stony or shelly Excrecence, growing hollow upon Rocks, and sometimes even upon the Back of a Tortoise-shell: When upon the latter, they are generally of a Limpet-shape, the former, of many irregular Shapes: Each Sort is inhabited by a Shell-fish peculiarly.

The TUFTED PENNATED SEA-WEED.

THE Roots of this are small and long; the main Stem is generally single, each Side elegantly adorned with small oval Leaves, growing opposite to one another, and, when dried, of a transparent yellow Colour; these grow in several Pairs, and then discontinue; so that the Stalk shall appear naked for about a Quarter of an Inch in Length; and then another Tuft rises; and so on alternately to the Top. This Plant seldom grows above four Inches high.

The PENNATED SEA-WEED.

THIS seldom grows above three Inches high, and exactly resembles a very small Pen-feather. It generally grows upon old Logs of Wood in the Sea, and most commonly not far from Shore.

The GREEN BROAD-LEAF'D SEA-WEED.

THIS differs not materially, in its Make, from the White-lettuce Sea-Weed, already described. It is observed, that Tortoises feed more upon this, than any other Kind of Sea-Weed.

The RED-LEAF'D SEA-WEED.

THESE grow in many oblong Leaves, about three Quarters of an Inch long, and of a light-purplish Colour; generally between high and low Water-mark.

The SEA-GRASS.

THIS is of a green Colour, hanging in many very fine long filky Shreds; growing generally upon the Rocks, between high and low Water-mark.

The THICK PLUSHY SEA-MOSS.

THIS is generally of a green Colour, of a soft plushy Texture; growing upon Stones and Rocks in the Sea.

The GRAPE-SEA-WEED.

THIS is of a dark Amber-colour. Its several Branches are so many hollow Tubes, the Extremity of each generally ending in a small, round Berry, about as big as a Grain of Pepper.

The GREEN SILKY SEA-MOSS.

THIS grows generally between high and low Water-mark; and very much resembles, in its Texture and Appearance, a confused scattered Cluster of raw Silk.





O F

EXANGUIOUS ANIMALS.

THES E are divided into Terrestrial, Aquatic, and Amphibious ; and, according to *Aristotle*, they may be farther classed, by the following Order, into three Kinds.

(1) First, Those that are composed of a soft fleshy Texture ; such as Snails.

(2) Secondly, Those that are more firm ; as all the crustaceous Kinds, such as Crabs and Lobsters.

And (3), Thirdly, Those that inhabit the firmest Shells ; such as Oysters, as well as all other Shell-fish.

These, and such bloodless Animals, are called Exanguious.

The MARBLED SNAIL.

I Found these in Plenty upon the Bank of a Pond, whose fresh Water had a Mixture of Salt-water, sometimes thrown into it at high Tides.

The young Snails hang in great Numbers upon the Grass, in the watery Edges of the Pond.

(1) Μαλακία ἐστὶν ὅσα ἀναιμα ὄντα ἐκτὸς ἔχει τὸ σαρκῶδες, ἐντὸς δὲ τὸ σερεόν, καὶ τὰ ἄναιμα τῶν ζώων, οἷον τὸ τῶν Σηπίων γένος.

(2) Μαλακόσαρκα ἐστὶν ὅσα τὸ μὲν σερεόν ἐκτὸς ἔχουσιν, ἐντὸς δὲ τὸ μαλακὸν καὶ σαρκῶδες, τὸ δὲ σερεόν αὐτῶν ἔθραυστον, ἀλλὰ φλασόν, οἷον τὸ τῶν καράβων γένος, καὶ τὸ τῶν καρκίνων.

(3) Ὁσφρακόδερμα ἐστὶ, ὃν ἐντὸς μὲν τὸ σαρκῶδες, ἐκτὸς δὲ τὸ σερεόν, θραυστόν, καὶ κάτακλον, ἀλλ' ἔφλαστον, τοιῦτον δὲ τὸ τῶν κοχλίων καὶ τῶν ὀσφρέων γένος.

†

The

The SEA-LEECH.

THE common People call this the Sea, or the Black-pudding: However, I shall call it, the Sea-leech; it hath the Name of Black-pudding from its great Resemblance to it.

Its ordinary Bulk is about five Inches long, and two in Breadth; yet I have known it to extend itself above eight Inches in Length.

They are generally found clinging to the lower Sides of Rocks or Stones, between high and low Water-mark.

They have no Appearance of Eyes, Legs, or Feet; at least, to the naked Eye.

Their Motion is very slow, and of the muscular Kind.

When the Tide of Flood begins to wash the Holes they are in, they extend from what we must now call the Head-Part, in a Bunch, ten or twelve Snouts like the Horns of a Snail, all coming from one common Root, like a Bunch of Coral; the Top of each being far wider than the Shank.

I am confident, that these (if I may be allowed to compare small Things with great) are designed, as Trunks are to Elephants, to be the Instruments of receiving their Nourishment thro' them.

Having examined the Inside of this, it is one continued Circumvolution of white Guts, not bigger than the base String of a Fiddle.

The Water that it emits, when squeez'd, is of so corrosive a Nature, that it smarts very much, and raises Blisters upon that Part of the Skin, upon which it falls.

The NAKED SEA-SNAIL.

THIS is generally of about an Inch and an half long; but, as it is capable of greatly contracting or expanding itself, it appears of various Bulk, according to its different Motions; slender, when it extends itself, and thick almost to a Roundness, when it is contracted.

It is found under the Rocks and Stones near the Shore.

The SEA-SCORPION.

WHAT we call here the Scorpion, is by *Petiver* called *Stella marina Scolopendroides*.

Its five Rays might perhaps properly cause it to be called the *Stella Marina*.

The SEA-FORTY-LEG.

THIS is about two Inches and a quarter long; the Back jointed; and divided into several *Annuli*, thick-set, with stiff short white Bristles.

These, when they are all erect, exactly resemble Plush.

The Head is guarded with a *Forceps*, resembling that of a Land Forty Legs; and is found under Stones and Rocks near the Shore.

The SEA-SUCKER.

THIS almost shapeless Animal is of a brown fungous tough Jelly-like Substance, sticking to the Rock always under Water: At a Distance, it hath the Appearance of a Sponge.

It is generally of an irregular roundish Shape, of about an Inch and an half in Diameter.

In the Centre of it appears a round Hole, about a quarter of an Inch broad: This I take to be its Mouth; for when this is touched, it closes its Sides together.

I SHALL finish this Class of Exanguious Animals, by describing one of a surprising Make, fixed to the Rocks and Stones, without any shelly Covering.

Its Length, is about an Inch, and three Quarters; and is an Inch in Diameter; the Outside granated, very much resembling the Roe of a Fish, interspersed with Veins of a Snuff-colour, and pale-red, mixed with very pale green Lifts: When it is feeding, both Ends are flat, the one cleaving to the Rock, the other exposed, the Flux and Reflux of the Waves: In the Centre of the latter is its Mouth: In this, when it opens, or gapes to receive what Nourishment the Sea, by the dashing of its Waves, throws in its Way, are seen innumerable small blunt spiral Feelers, of about a quarter of an Inch long; interwoven within one another: These are all in Motion, as well as the Mouth open, when the Waves dash against the Rocks they are upon, as if they were, at that Instant, in Search of Food. In the Intermission of the Waves, the Mouth closes; and these Feelers, which are very many, and much resembling, in Shape, the small *Vesiculæ*, which constitutes the pulpy Part of Oranges or Lemons) are contracted, and with a strong, but slow muscular Motion close together, and are, as it were, sucked back into the Body of the Animal: Yet they immediately dart out upon the Return of the Waves; but when the Whole is intirely left dry, by the Absence of the Water, this flat circular End, in which the Mouth and Feelers appeared, and

U u u

which,

which, just before, when feeding, were of an Inch Diameter, is in an Instant contracted, like the Mouth of a Purse drawn together; and becomes of a blunt conic Form, the Base being the Part fixed or clinging to the Rock.

Its Appearance, in this its quiescent State, is represented in *Plate X. Fig. 4.*

There is likewise a less Sort, of the same Species with the above described, differing chiefly in Colour, which of the smaller Kind is black.





O F

CRUSTACEOUS ANIMALS.

AS those Kinds of Fish, whose Safety depends upon their Swiftneſs in Swimming, have not only their Tails and Fins properly adapted for that Purpoſe, but their Eyes likewiſe (witneſs the Dolphin) never jutting out above the Surface of the Head, leſt they ſhould retard their Motion thro' ſo thick a Medium; ſo, on the other hand, as the Safety of Crabs and Lobſters, &c. depends not upon their Celerity, and as theſe inhabit the Cavities of ſubmarine Rocks and Cliffs, where their Enemies often lurk under the ſame Shelter; to prevent therefore a ſudden Surprize from any of theſe, Providence hath not only guarded them with a ſtrong ſhelly Covering, and often Prickles; but hath ſo commodiouſly formed the Eyes of theſe Creatures, that by their great Prominency, and jutting out, ſometimes above half an Inch, they can, without moving their Bodies, take at once a circular View all around them.

The *West-India* Lobſters, or what are ſo called, being in Reality the ſame Make in this Part of *America*, differ in general, from the *Engliſh* Kind, by their Want of Claws, and being guarded with many Prickles.

Theſe, as well as all other Kind of Shell-fiſh, as *Milton* elegantly expreſſes it,

*Within their pearly Shells at Eaſe attend
Moift Nouriſhment, or under Rocks their Food
In jointed Armour watch.*—

The

The DOMINICO-LOBSTER.

THIS Lobster seldom weighs more than about two Pounds.

The RED LOBSTER.

THIS is the largest Lobster that we have in this Sea; for it often weighs twenty Pounds; its Colour as above; but the larger it is in Bulk, the less delicious it is.

The GREEN LOBSTER.

THIS derives its Name partly from its Colour; and generally weighs, when full-grown, between three and four Pounds.

Its two largest Horns, or Feelers, are about eighteen Inches long: From between these come two lesser ones, forked or divided near their Extremities.

The Eyes are guarded by two sharp-pointed crooked Horns.

The Extremities of the Feet are hairy; and the Shell upon the Back, especially about the Roots of the great Feelers, is very thickly studded with sharp Prickles.

The QUEEN or the BONNE-GRACE LOBSTER.

THE largest of this Sort never weigh above two Pounds.
This is justly esteemed one of the best of the Lobster Kind.

The LAZY CRAB.

THIS is a very large beautiful Crab.

The Back is generally full of small Knobs of a pale-scarlet Colour; guarded here and there, but especially about the Edges of the Back-Shell, with short sharp Prickles.

It hath four strong Legs on a Side; these are covered over with a short brownish Hair or Pile, and are likewise, in the Male Crab, defended with Prickles, the last Joint of each Leg ending in a sharp Point.

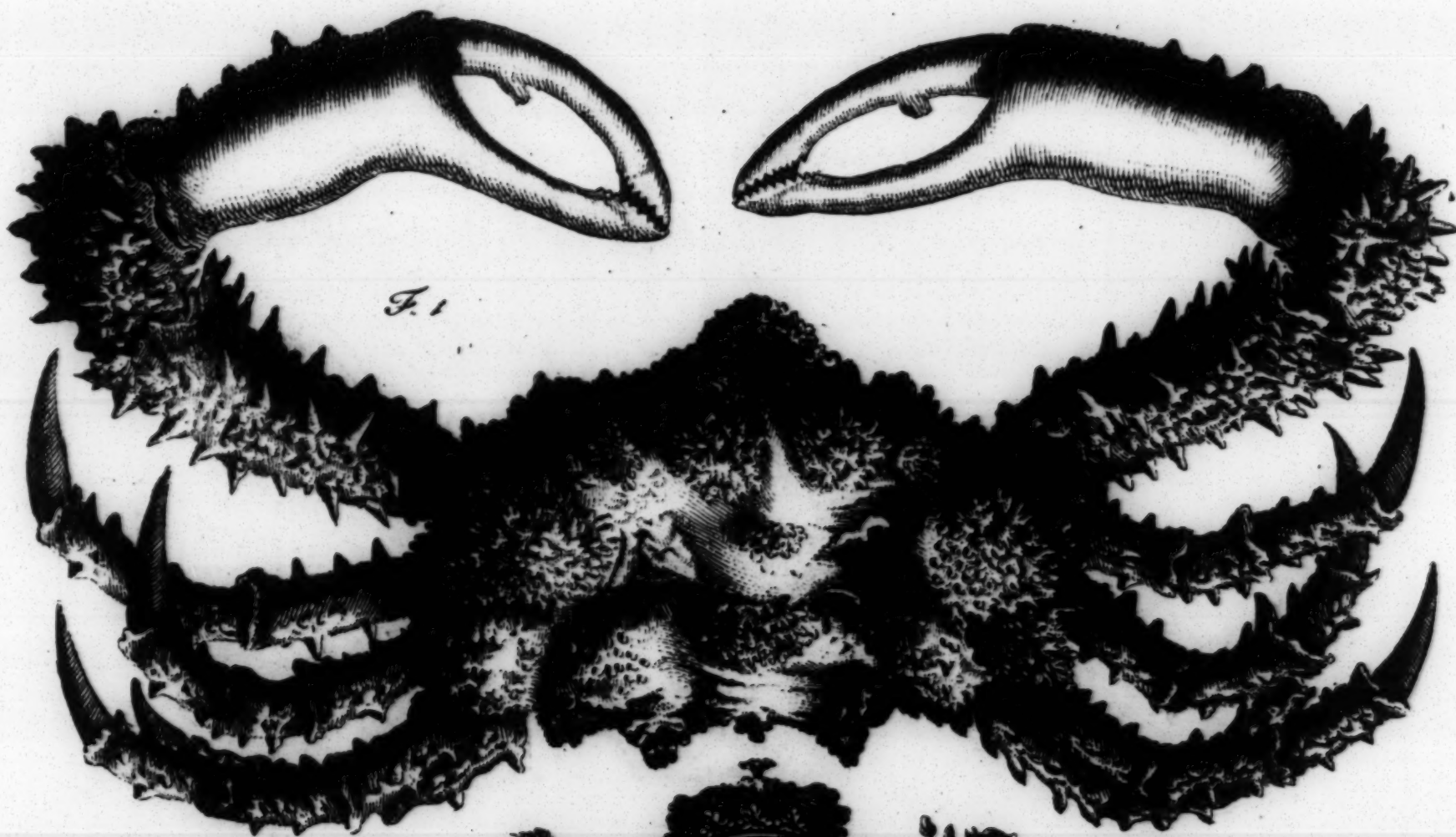
Its two great Claws, from the Setting-on to the Body to their Extremities, are often ten Inches long.

The very Tips of the two meeting Claws, with which it holds its Prey, remarkably differ from all other Crabs, by their great Breadth, as well as by their several regular Indentings, which, when they close together, fall as regularly into their Sockets as the opposite Sides of a Pair of Nippers.

A Claw of one of these uncommon Crabs may be seen in the Collection of Mr. Peter Collinson.

The Whole is delineated in Plate XXV. Fig. 1.

The



To His Grace the DUKE of NORFOLK,
This Plate is humbly Inscrib'd &c.

J. Mynde sc.

The HORSMAN-CRAB or BEN-TROTTERS.

THIS small whitish Crab, which is generally to be found between high and low Water-Mark, and is called *Horsman* from its great Speed in securing itself, either by running into its Hole, or the Sea, is far less than the white Land-Crab: Its Number of Feet are equal.

The CLUB-MEN.

THESE are very small Crabs, near as small as those called the She-Biters.

They are to be seen near the Edges of salt-water Marshes; they burrow in these sandy and clayey Places.

Their Claws are very large, in proportion to their Bodies: From hence it is said that they derive their Name.

The SHE-BITERS.

THESE are very small Crabs, inhabiting the Shoals.

Their Backs are not wider than an *English* Shilling.

Their Claws, in proportion, are very large.

The LONG-LEGGED VERY SMALL WHITE CRAB.

THE Body of this is not larger than an *English* Silver Groat.

Its very slender Legs are at least a Foot and an half long, and resemble knotted Thread.

This Species of Crabs are so seldom to be met with, that I never saw but one, and that dead, which was in the Collection of my learned Friend Dr. *Warren*, deceased.

The SCUTTLE-CRAB.

THIS is a small brownish Crab, marbled on the Back with darkish Lines.

It feeds generally upon the Moss that grows upon the Rocks, between high and low Water-Mark.

Their Armour, when cast, which they cast once a Year, looks very beautiful.

This Crab will creep up and down the most steep perpendicular, or even a projected Rock.

The RED-SEA-CRAB.

THIS differs very little, if any thing, from the same Species in *England*, except in the Colour, which is of a fine Scarlet; and therefore abundantly brighter than that of the *English* Crab, which is of a dirty Red.

They grow here to a great Size; but are not, however, so large as those of the same Kind in *England*, but better tasted.

The SIR-EAGER CRAB.

THE Back-Shell of most Crabs is somewhat roundish; but of this 'tis near four Inches long, and not full two broad, the opposite Parts in Length ending in a sharp strong Prickle.

From each of these Points to the other the Shape of the Shell comes nearest to that of a Semicircle.

This is regularly and deeply indented like the Teeth of a Saw, each ending in a sharp Point.

The Colour of the upper Shell is blackish, clouded or stained with some scattered Spots of Pale-white.

The two Claws are long, but slender; the upper Joint, as well as the Claw itself, guarded with three or four Prickles or Teeth.

The upper Part of the last Joint is irregularly squared, and of a brownish Colour; the Part underneath somewhat rounder, and of a bluish Colour.

Their Legs are equal in Number to those of the Crabs already described; and they are chiefly caught in salt-water Ponds near the Sea.

They are justly esteemed good Eating.

The LARGE WHITE LAND-CRAB.

THE Claws of this are very long and large, in proportion to the rest of the Body.

These always burrow in a sandy Soil, near the Sea; and come chiefly out at Nights, to feed upon the green Grass, and tender Vines, growing upon such Places.

They often likewise feed upon Manchaeel Apples, as well as upon the Leaves or Berries of Poison-trees.

At such times they are dangerous to be eaten, unless very great Care be taken to wash the Fat, as well as the other Meat on the Inside, with a sufficient Quantity of Lime-Juice and Water.

The MULATTO CRAB.

THIS differs from the white, already described, chiefly in the Colour of its Shell, which is yellowish, and its Residence, which is often up in the Country, above two or three Miles distant from the Sea.

They generally burrow about the Edges of fresh-water Ponds, the Bottom of their Holes being always so deep as to reach the Water.

These feed in the Night upon the green tender Grass about the Sides of the Ponds, and are in general esteemed as good Eating as the white Crabs; but prove equally as poisonous, if eaten soon after they have fed upon the Berries of Poison-trees; unless, as before, the Fat and the inside Meat is first washed in Lime-Juice; which either corrects or washes off the venomous Quality.

The BLACK LAND-CRAB.

THIS small Crab, though I have never seen it, yet, as I am credibly informed, is generally an Inhabitant of old Timber-Houses, and such Ruins; and it is very fat and delicious, but rare and uncommon.

The RED LAND-CRAB.

THIS is but a small Crab; the Back seldom above two Inches long; its Colour of a blackish Red.

It hath two Claws, and four Legs, on a Side.

These Crabs, after a heavy Shower of Rain in the Months of *March*, *April*, and *May*, are to be seen in great Numbers, loaden with Spawn, going down to the Sea-Side to deposit it in the Sand, near the Wash of the Water; and soon afterwards to return into the Country, but generally not very far from the Sea; though I have often seen them at above two Miles Distance from the salt Water.

As these are very fat, they are esteemed good Eating.

The common Method of dressing them among the Negroes is, to roast them.

This Species of Crabs were perhaps very plentiful in *Italy* in the Time of *Virgil*; for, in his fourth *Georgic*, he forbids roasting of red Crabs near an Apiary, the Smell of them being disagreeable to the Bees.

The SOLDIER-CRAB.

THIS is amphibious.

Sometimes it is caught upon the Rocks at a considerable Distance from the Land; but they are most commonly seen upon the Shore.

It is thought to have derived its Name from its frequent Change of its Quarters; for its first Appearance is generally in a very small Periwinkle-shell; as it grows too big for this, it looks out for another empty Shell, agreeable to its present Bulk; soon after, it takes up its Abode in a large Wilk-shell.

It hath two Claws, resembling those of a Crab.

The Tail-Part affords a great Quantity of Oil, which is looked upon to be of great Service to lubricate swollen or stiff Joints.

These are often found cleaving to Rocks in the Sea, but oftener in Granaries on Shore, where they destroy much Corn.

The Tail, or the hinder Part, is covered with a thin Skin.

This is delineated in Plate XXV. Fig. 2.

The HORNED CRAB.

THIS Crab is of a middle Size.

The Shell upon the Back, in some Places, is much elevated, and again indented.

Its Head is guarded with two Pair of Horns, both very strong, and sharp-pointed; the one Pair about an Inch and an half long, the other not above half an Inch.

Each Side of the Trunk or Body is likewise armed with four sharp Prickles, resembling a Cock's Spur.

The Body is supported by four Legs on a Side, besides two long feeding Claws, each ending in a *Forceps*.

The whole Crab is covered with brownish plushy Hairs.

As to the rest of its Make, it differs from other Crabs, in that its Shell is longer in proportion than most other Crabs, the *Sir-Eager* excepted, and more sharp-pointed than any towards the Head.

This is delineated in Plate XXV. Fig. 3.

The SEA COCK ROCH.

THIS is of the Crab-Kind, and about an Inch long.

Its upper Shell, which is of a brownish White, freckled with Black, much resembles, in its Make, that of a Tortoise.

The Head is provided with two hairy Feelers, like the Land-Cock-Roch.

It hath likewise near the Mouth two long Legs, or Providers, one considerably longer than the other.

The Body is likewise supported by six other shorter hairy strong Legs.

The Tail-Part ends in a sharp-pointed Flap, which covers Part of the Belly, and in the Females is the Repository of the Spawn.

These live in Holes in the Sand, in the Wash of the Water.

They are sometimes eaten; and have a Crab-like Taste.

SHELLS, *and* SHELL-FISH.

THESE are also of the exanguious Tribe; and differ from the crustaceous Kind, by having their Organs less perfect; for, as the admirable Mr. *Locke* observes, an Oyster or Muffel hath not as many, nor as quick Senses as a Man, or several other Animals: Nor, if it had, would it, in that State, and Incapacity of transferring itself from one Place to another, be bettered by them. What Good would Sight and Hearing do to a Creature that cannot move itself to or from an Object wherein at a Distance it perceived Good or Evil? And would not Quickness of Sensation be an Inconvenience to an Animal, that must be still where Chance hath once placed it, and there receive the Afflux of colder or warmer, clean or foul Water, as it happens to come to it?

It may be expected, that I should here consider these beautiful Productions in a physical Light, and as they are a Curiosity belonging to the Cabinets of the *Virtuosi*: Yet I shall beg leave to speak of them, as they contribute to the Amusement of the Ladies. And this I am the rather induced to do, as I have heard several of the Fair Sex, who are fond of Shell-work, frequently ridiculed, as wasting their Time in a trifling and useless Manner; and this not without a very considerable Expence. That this Employment is by no means trifling or useless, is easily proved, as it is absolutely grounded on the noble and elegant Art of Designing, and as its End is equally that of Imitation. What the Painter performs by an Assemblage of various Colours properly distributed, is here produced by a Disposition of Shells, as their different Tinctures, Shapes, or Sizes, happen to direct the Fancy: Add to this, that the Representation is by far more striking in Shell-work, than on the Canvas.

I have seen a Rose in Shells, glowing with as exquisite a Red, as that which it received from the Spring. And hence it appears, that Shell-work partakes of the Nature of Painting, if not of Statuary; imitating not only by Colours, but a full Relievo. In short, nothing can be more properly termed a new Creation, than a well-executed System of Shell-work.

What can be more delightful to the Imagination, than a Grotto completely embellished with this Kind of Imagery? With what truly romantic Ideas must it inspire one, to sit in a Room furnished with the Riches of the most distant Shores and Oceans! And these not confusedly thrown together, but judiciously disposed into regular Representations of natural Objects! We are struck with Astonishment! Nor can we determine, whether we should most admire the Sun, which gave to each particular Shell its delicate Hue, or the Hand of the fair Artist, which ranged them with so much Skill.

It will be needless perhaps to add in this Place, that one of Mr. Addison's Sources of the Pleasures of Imagination may be found in a Work of this Sort, in its highest Perfection; namely, *The Beautiful*.

Thus I have obviated the Objection, that this Amusement (or rather Art) is useless and trifling. And here it will be proper to take Notice, that the Genius of Women is much better fitted for this Employment, than that of Men. For as Shell-work consists in forming pleasant Pictures, and agreeable Representations, and as these are effected by the means of Shape and Colour artificially put together, a certain Facility and Fancifulness is required, which our Sex is an intire Stranger to.

But, allowing this Diversion to be trifling and useless, the most ill-natured Caviller cannot deny, but that it is innocent. How many Ladies do we see fashionably murdering their Time in Gaming! A Diversion attended with some of the most abject Vices, and shocking Consequences: Vices, which one would think inconsistent with the Softness of the Sex, and Consequences, which, I am sure, that Softness can but ill sustain. A Practice this, which ruins their Honour, their Families, and Fortunes; and (what one would think the Ladies would take more to Heart)—their Faces. Whereas the Joys of this our Pursuit are pure, and intirely founded on a contemplative Turn of Mind; especially, if we suppose, that one of our modern *Calypso's*, after having thus adorned her Grot, would no doubt chuse to reap the Fruit of her Labours, by making it a Place to cultivate her Mind in by Musing.

Some Diversions must indisputably be indulged the Fair Sex; and this, I think, is not only as becoming, but as proper, as any. We cannot suppose, that our *Cynthia's* and *Flavia's* can leap a five-barr'd Gate, or walk half a Day with a Gun in quest of a Wood-cock; Sports, which are better suited to the Strength and Roughness of the opposite Sex. But it may be objected, that there are other Diversions equally adapted to the Delicacy of Women; for Instance, the Cultivation of Flowers. In the first Place, I shall remark, that the Study of the Florist is not so pleasing; whose chief Pride consists in a Variety and Beauty of Colours. Now I appeal to the most experienced Naturalist, Whether the most choice Collection of Tulips, can vie in beautiful Colours with the *Pamana*, or Sun-shell, the Ear-shell, and the *Murex*, which affords the genuine *Tyrian Purple*? And now I am particularly insisting on the Beauty

Beauty of Shells, I cannot but observe, that no antient Author, besides *Lucretius*, has taken notice of them in that View. His Lines are these:

*Concharumq; genus, parili ratione, videmus
Pingere telluris gremium, qua mollibus undis
Littoris incurvi bibulam lavit æquor arenam.* L. II. v. 374.

The Race of Shells, with ever-varying Birth,
So paint the Bosom of the bounteous Earth;
Where the calm Sea the concave Margin laves,
And bathes the thirsty Beach with gentle Waves.

In the next Place, the Study of Flowers is more expensive. I confess indeed, that a Collection of Shells cannot be prepared without some considerable Charge. But do not we daily see large Sums thrown away on a single Tulip-root, the Success of whose future Beauty is intirely precarious? And are not the Hopes and Fears of its Master determined by Showers and Sun-shine? Besides, after much Pains and Solitude, when the Flower is arrived at its utmost Lustre, how soon does it fade! Whereas the Strength and Beauty of the Shell is fixed, and will stand through many Ages. Indeed, the only Argument that the Study of Flowers has to recommend itself to the Ladies, is, that it will admirably teach them how frail and fugitive is Beauty!

I shall only add, that I hope the following Book, from what has been said, will be considered as not only written to gratify the Curiosity of the inquisitive *Philosopher*, but to improve the Imagination of the Female Artificer.

Of the MUREX.

BUT of all the Shell-fish, which are picked up on the Shores of this Island, the Purple-Fish is the most curious and valuable, and deserves a distinct and a more accurate Description.

We make no Scruple to assert, that this Purple-Fish is the so much celebrated *Murex* of the Antients; since it so well agrees with the Account which *Pliny* and other *Naturalists* have transmitted to us of the latter; as we shall endeavour to evince in the following Remarks.

And that we may proceed with as much Clearness and Perspicuity as we can; it may not be amiss to enumerate the several Appellations with which this particular Species or Sort of the Purple-Fish was distinguished from the rest, and to account for each as well as we may.

I. It is too notorious, that classical Authors, and more especially the Poets, have *indiscriminately* used the Words *Purpura*, and *Murex*; and have given the general Name, *Purple*, to the several particular *Tinctures* of these different Shell-Fish, as if the *Dye* of the one did not differ from the

*Its several
Names.*

the Dye of the other; and the *Purpura* and *Murex* were ~~on~~ and the same Fish. But let us, if it be possible; be more exact, and distinguish them as well as we can; which we shall attempt to do, by giving the Reader as clear and precise a Description of the *Murex* [for to that more especially shall we confine our Inquiries] as we are able to collect from antient Authors.

Κῆρυξ, and
Buccinum.

1. The *Murex* is often called by Greek Authors, κῆρυξ, and *Buccinum* by the *Latins*; both which Appellations are evidently bestowed upon it, because it belongs to the Tribe of those Shell-fish which are stiled *Buccinatores*; or, as *Horace* names them, *sonantes Conchæ*, sounding Conchs; whose Shells, being twisted, hollow, and fit for the Retention of the Air, resemble, in an imperfect Degree, that Shell, which the Antients used in giving their Alarms and Summons, both at Sea, and on Land; and which some of the Moderns at this Day carry and use in their Ships.

Murex.

2. And as these Names are attributed to the *Murex* from the Form or Make of its Shell; so we are induced to believe, that the Appellation *Murex* owes its Rise to the Roughness of it. For its Shell is studded with Prickles, ranged in regular Rows, as is the *Purpura* also, and many other Shells of this Class: So that the Name *Murex* is by no means proper to the Purple Conch we are speaking of; but belongs to a large Tribe, whose particular Families are variously distinguished. It is confessed, that *Pliny* (a) [if we understand him, and the Copy be clear of Errors] asserts, "that the *Buccinum* hath no Prickles, as hath the *Purpura*; and "that in the Shells of both there is a Number of circular Rows, or Ribs, "corresponding to the Number of their Years." But we presume this laborious Naturalist either means, that the Prickles of the *Buccinum* are not so prominent or large as those of the *Purpura*; or herein has forgotten himself. For if the *Buccinum* and *Murex* are the same Fish, and allowed by him (b) to be so; it follows, that the *Buccinum* must have the *Aculeos*, as well as the *Purpura*, since the Name *Murex* was evidently bestowed upon it, because its Shell is pointed or prickled (c). This is the proper Sense of the Word *Murex*; which is therefore applied to *Calthorps*, or *Chausse-trappes*, warlike Engines, which are armed with Iron Teeth, or Spikes; and its Derivative *Muricatus*, to every thing that is sharpened and pointed.

From these two Appellations, taken together, we may form a just Description of the *Murex*, and define it to be "a Conch, studded on its

(a) *Alterum* [viz. *Purpura*] *clavatum est ad turbinem usq; aculeis in orbem septenis fere; qui non sunt Buccino; sed utrisq; orbes totidem, quot habeant annos.* Nat. Hist. L. ix. c. 36.

(b) See Notes, *ibid.* And *Vossius* in his *Etymologicon* shews, that the *Murex* answers to *Aristotle's* Κῆρυξ [i. e. the *Buccinum*], and is supposed by some to be derived from it. In Voce *Murex*.

(c) So *Isidorus* says, "Murex est Cochlea Maris, dicta ab Acumine & Asperitate." Lib. ii. c. 6. *Originum*. Here *Isidorus's* *Acumen* signifies just the same Thing, as *Pliny's* *Aculei*.

“ *outer Shell with sharp and regular Points ; and twisted or wreathed in the Form and Likeness of the Blowing-shell.*” In which last Particular it is distinguished from the other Purple-Fish, which is usually stiled the *Purpura*.

3. I need not add, that the *Murex* is often called *Ostrum* also: For from ^{Ostrum.} this Name we shall receive no further Information in our present Inquiry; unless it be, that as this Word means really no more than the *Shell* (*d*); so we may from hence conclude, that the Antients bestowed this Appellation upon it, by way of *Eminence*; to testify, as it were, the just Sense they had of its superior Excellence to all other Shells.

II. Thus far then as to the *Names* attributed by the Antients to the *Murex*; which have enabled us to discover the *Form* and *Fashion* of its Shell; which the curious Reader will find to correspond with the annexed Draught [Plate XXIV. Fig. 2.], which is taken from a Shell now lying before me. The *Murex* is a small Fish; the best and largest Sort of them, if we believe *Athenæus* (*e*), not exceeding one Pound in Weight. Those we met with on the Shore of this Island (as far we could discover) ^{Its Size.} are much less, falling very short, even the greatest of them, of a Pound; and most of them being little more than half as heavy. The Dimensions of the Shell before us, which is one of the common Size of those, that are here found, will justify this Account: For on the *flat* Side, or *Mouth*, it measures no more than three Inches and an half in Length, and two in Breadth; and on the *Curve*, or outward Shell, four Inches and an half in Length; and over the thickest Part, three Inches and an half in Breadth: And this Measure rather *exceeds*, than *falls short* of the Truth.

The Colour of the outward Shell is a dark Grey, sometimes faintly tinged with a Yellow.

(*d*) *Ostrum* is derived from the Greek ὄσρεον, a Name, which the Grecians bestow on all Sorts of Shell-Fish. It was also stiled *Conchylium*, for the same Reason, i. e. the *Shell-Fish*, from the same Greek Origin, κογχύλιον. But neither this nor that Appellation was peculiar to the *Murex*, properly so called; but attributed also to the *Purpura*.

(*e*) Γίνονται δ' ἔναι τῶν μεγάλων καὶ μιναιαῖαι. L. iii. C. 11. “ There are some of the great ones, and those of a Pound Weight.” He calls them indeed Πορφύραι, the Purple-Fish; but I make no Doubt this Word must be taken for the several Species; for the *Murex*, as well as for the *Purpura*. But if this be not granted, it will follow, that if the largest *Purpura* do not weigh more than a Pound, the largest *Murex* will not weigh so much: For *Pliny* assures us, that the *Purpura* is larger than the *Murex*, *Buccinum minor* Concha, L. ix. C. 36. And though *Rondeletius* here corrects the present Reading, and changes *minor* into *major*; yet this Liberty with the Text is not to be allowed. And *Athenæus*'s Authority in another Place, L. iii. C. 11. is against it, who says, that the smaller *Purpura* are bred on the *Shores* and *Sea-coast* [the usual Haunts of the *Murex*, as we shall see hereafter]; and that their *Flos* is red; whereas that of the larger *Purpura* is mostly black, and sometimes, ἐρυθρὸν μικρὸν, a little red, i. e. of the Violet Colour. These two Circumstances convince us, that by the smaller *Purpura*, *Athenæus* means the *Murex*.

The Inhabitant of so small a Shell cannot reasonably be expected to abound with a large Quantity of so valuable a Liquor; and indeed an hundred of them are scarcely sufficient to wet and discolour a Cambrick or Lawn Handkerchief of an ordinary Size.

Where
found.

III. As the *Shell* of the *Murex* differs from that of the *Purpura*; so the *Places*, which each more particularly delights to frequent and inhabit, are also different. *Pliny*, in recounting the various Kinds or Sorts of the *Purpura*, distinguishes them very circumstantially (whether justly or no, let the Reader determine) by the Places of their Abode; stiling some *Pelagiæ* (f), that love and haunt the deep Water; and are those of which he speaks, when he says, that some are caught with small Nets, cast into the Deep: Others again he calls *Littorales* (g), such as frequent the Shore; others *Lutenses*, which delight in Mud and Slime; and others *Algenses*, which shroud or hide themselves in the *Sea-Weed*. But the *Buccinum*, or, what is the same, the *Murex*, sticks and fastens, he says, only on *Rocks*, and there or thereabouts is gathered or picked up (i). And in this Situation I first discovered it. For, walking one Day on the Shore, on the North Side of the Island, and seeing a Shell-Fish, fixed to the Rock before me, I ordered a Slave to fetch it. The Lad, advancing towards it with too much Hurry and Impetuosity, grasped it with so much Roughness, that his Hand was immediately stained with a florid and most delightful Crimson.

This Accident, the Reader will suppose, awakened my Curiosity in no less a Degree, than one of much the like Nature did that of the *Egyptian Hercules*; whom the Inhabitants of old *Tyre* acknowledge to have been the first Discoverer of the *Murex*, and Inventor of the Purple-Dye. "He," as *Julius Pollux* relates the Story, "amusing himself on the Sea-coast, and perceiving the Hair of his Dog's Lips to be tinged with a fine Red, was excited to examine more nicely into the Cause; and discovered that his Dog had found, and been eating, the *Purpura*, or Purple-Fish (k)." Or rather thus; as the Story is related by *Polydore*

(f) The Scholiast on *Apollonius's Argonauts*, commenting on the Word πορφύρεσκειν, L. i. v. 461. explains it, κατὰ βάθος ἐνεθυμείτο, "He thought upon it deeply or seriously in his Mind;" and adds this Reason, Πορφύρα γὰρ εἶδος ἰχθύος ἐν βάθει τῆς θαλάσσης εὕρισκόμενον; the *Purple* is a Kind of Fish found in the Bottom of the Sea. See also Schol. in L. ii. v. 548.

(g) I am induced to believe these *Purpuræ littorales* are the *Murex*; and that what he says of them, means no more, than what he tells us of the *Buccinum* or *Murex*, when he says, it is gathered or taken about or near the Rocks. And then the *Purpuræ littorales* of *Pliny* are the same as the smaller *Purpuræ* of *Athenæus*, which are bred on the Shores and Sea-coast.

(i) *Buccinum non nisi petris adhæret; circaque scopulos igitur.* L. ix. C. 36.

(k) No one will doubt, I believe, that this was the *Murex*; and yet we see the Grammarian calls it the *Purpura*: An Instance of what hath been before observed, that these Names are attributed indiscriminately by Authors to the same Fish. And *Polydore Vergil*, in the Citation that follows, is guilty of the same Error.

Vergil,

Vergil (l), who hath given it a more sprightly and gallant Turn. “*Hercules* was in Love with a young Lady, a Native of that City, whose Name was *Tyros*. A Dog that used always to attend her, creeping one Day among the Rocks, found a *Purple-Fish*; and, having broken the Shell, and eaten the Meat, returned to his Mistress with his Chaps tinged with a *purple* or *scarlet* Dye. The Lady, delighted with this uncommon and beautiful Tincture, declared to *Hercules*, when he was paying her the next Visit, she would no longer receive his Addresses, till he had procured her a Gown of a Colour as bright and splendid, as what he saw on the Dog’s Lips. This full and positive Injunction forced the Hero to go in quest of the Shell-Fish; which being found, he not long after brought the Lady the Present she had required, and became the Inventor of the Purple-Dye.” The *Tyrians*, it is evident, gave so much Credit to the most particular Circumstance belonging to this Tradition, viz. the Manner whereby the *Purple-Fish* was first discovered, as to preserve the Remembrance of it long after on their Coins; some of which may be now seen, with the *Dog* and *Purple-Fish*, in the Cabinets of the Curious.

But to return: I shall offer my Remarks on the several Particulars of these Stories hereafter, in the Process of this Dissertation, and as they occur: And in this Place only take notice, that though these Authors differ very much in other Circumstances; yet they agree in this, that the Dog, both that belonging to *Hercules*, and that of the young Lady, found the Shell among the Rocks, which *Pliny* says is the usual Habitation of the *Murex*, and the Place where I first discovered the *Barbados* Shell; which we presume is a third Circumstance in favour of our Shell, towards proving it to be the *Murex* of the Antients.

IV. The Flos or Tincture of the *Barbados Conch* stained, as we before observed, the Hand of the Slave, with a florid and bright Red. Now *Aristotle* (m), in describing the *μήρυκες*, i. e. the *Murices* (for of them only he must be supposed to speak), uses almost the very same Words, saying, “The Juice or Liquor, being either squeezed or emitted, dyes the Hand with a florid Colour.” And *Pliny* (n), after him, assures us, that the Tincture of the *Buccinum*, mixed with that of the *Purpura Pelagia*, gives the latter *austeritatem illam, nitoremque illum, qui quaeritur, cocci*, the Fulness and Brightness of Scarlet. Lastly, we observe, that the Shell which *Tyros*’s Dog picked up, emitted a Liquor, which tinged his Chaps with a *Scarlet-Dye* (o). This Colour, then, we suppose to be, among

Of the
Flos, or
Tincture.

(l) *De Rerum Invent.* Lib. iii. C. 6.

(m) The Words are inserted into *Athenaeus*, L. iii. C. 11. from *Aristotle*, by his Latin Translator; and are these, “*Expressus ille succus manum tingit florido colore.*”

(n) *Nat. Hist.* Lib. ix. C. 38.

(o) “*Sua labia puniceo colore infecit.*” P. *Vergil.* *ibid.*

other Marks, a *distinguishing* Note and Sign of the *Murex*, properly so called. For *Pliny* (p) assures us, there are only two Kinds or Genus's of the *Purple-Fish*; and that, from the different Mixture of the respective Juices of each, the various Sorts of Purple were made.

The *Colour* therefore of the *Flos* or Tincture is another favourable Circumstance, which strengthens our Comparison, and renders it probable, that the *Barbados Conch*, we are now treating of, is the *Murex* of the Antients. And here we desire the Reader to recollect *another* Particular in the forementioned Story, which must not be omitted: It is this; The Lady required, that *Hercules* should present her with a Vest or Garment of as beautiful and lively a Colour, as that, which he then saw on the Dog's Lips (q).

This Purple-Juice is repositied in a small transparent Bag, or rather Vein, on the Back of the Fish, not far from the Head. And when it is taken with a Pencil or otherwise from the Vein, the Shell being broken, it is of the Consistence of a thin Cream, of a yellow-greenish Colour; smelling raw, and very disagreeably; and the Wool, Cotton, or Linen, that hath been soaked in this Liquor a *few Hours*, afterwards assumes a deep scarlet Hue. But what shall we say is the Reason, why this same Liquor, when transfused or ejected through the Mouth of the living Fish, dyes the Hand of him who plucks it from the Rock, *immediately*? Is it because, when the Juice is percolated or strained through the Vein by the *living* Fish, it is mixed with some other Liquor, that *accelerates* this Alteration of Colours? Or because, when the Fish is *dead*, the *Flos* is itself *debilitated*; because less vigorous and able to exert its extraordinary Virtue? Whatever be the Cause, the Fact is certain: For the Liquor, when emitted by the Fish, *immediately* stains the Hand; but when taken out of the Vein of the dead Fish, it is *some time* before the Wool receives the Tincture.

But though we are not able to account for this sudden *Transmutation* of Colour; yet the *Use* of it arising to the Fish itself we think is evident; and affords us a fresh Instance of the Wisdom and Contrivance of the great Creator; who hath hereby furnished the *Murex* with the Means of

(p) *Concharum, ad purpuras & conchyliis, eadem quidem est materia; sed distat temperamento. Duo sunt genera. Buccinum minor Concha — alterum Purpura vocatur. Lib. ix. C. 36.*

(q) *Canis illius labris splendidior, says P. Vergil. ibid.*

(r) *Buccinum per se damnatur, quia fucum remittit. Plinii L. ix. C. 38.*

(s) *Athenæus, from Aristotle, says, ἀνὰ μέσον τῆ μήκωνος καὶ τῆ τραχήλεως ἀνθος ἔχουσιν. L. iii. C. 11. Μήκων, or Papaver, is τὸ ἐντὸς τῆ ἰχθύος, internum, seu intestinum piscis, as he acquaints us from Epænetus, ibid. Pliny says, the Flos lies in mediis faucibus; which his Annotator corrects, and says, inter hæc [viz. cervicem & papaver] supra ventrem flos situs est. L. ix. C. 36.*

securing itself from Danger ; which, as the Ink-Fish, is directed, at the Approach of its Enemy, to emit this purple Liquor, which, being *nauseous* and *offensive*, annoys and beats off its Assailant.

The LARGE CONCH.

Buccinum maximum, labro maxime patente purpureo, clavicula muricata.
Lift. Hist. Conchyl.

THIS kind of Fish is of two Sorts, distinguished by the Thickness or Thinness of their Shell.

That with the thinnest Shell is generally the largest, and the other the most ponderous.

The Outside is of a brownish White, studded at uncertain Distances with blunt-knobbed Protuberances.

The Inside is finely polished ; and its Colour, near the Extremity, of a pale Red ; farther in, of a deep Maiden's-blush.

The Head of the Fish is guarded with a black horny Beak, or Tongue.

This, being extended out of the Shell, and fixed in the Sand, by a strong muscular Motion, drags the Fish with its cumberous Weight of Shell after it.

Aristotle and *Pliny* are of Opinion, that the Use of this Beak, in some of the *Conch* Kind, is to pierce thro' other lesser Shell-Fish, which they prey upon.

Though this may be one of their Ways of Feeding, yet they are seldom destitute of Food at less Trouble ; for there grows upon the Outside of their Shells a fine whitish Moss. This, in all Probability, is no less agreeable to them, than the green broad-leaved Moss is to the *Tortoise* ; for the whole Fish (except the Tail, which remains in the Shell) is seen to come out of it to feed upon this Moss, which it licks very clean from the Shell ; so that they always carry some Part of their Food along with them.

They are likewise to be met with feeding, after great Floods, in the Sea, opposite to deep Gullies, or Rivers ; for as these Torrents generally carry a great Quantity of Land-Fruit, Leaves, and such Fæces, into the Sea ; the *Conchs* are often seen to feed upon them.

They are evidently Male and Female. The *Penis* of the Male is above two Inches long.

The horny Beak above-mentioned is near two Inches in Length, and three Quarters of an Inch broad, sharp-pointed, and somewhat crooked.

This is fortified with a strong middle Rib, and fastened to a tough cartilaginous Neck, as thick as one's Thumb.

The upper Part of this, by several cross Indentings, is made as rough as a Rasp : It is with this Part that it licks, or rather scrapes off, the Moss that grows upon its own Shell.

A a a a

About

About two Inches lower appear three cartilaginous Protuberances of a blunt conic Form.

Two of these are about an Inch and an half long, on whose Extremities appear the Eyes, surrounded by two bluish Circles.

The Third, which stands between these, is near as thick as a large Swan's Quill, and two Inches long; the Extremity of it ending in a Mouth, which, when the Fish doth not feed, is strongly contracted.

Somewhat below these, in the Male, appears the *Penis*.

When the Tail-part, which is gritty, and somewhat sandy, is taken away, the rest of the Fish, being fry'd, eats like Tripe, but shorter, sweeter, and more luscious.

The empty Shell, especially those that are thin, is made use of, instead of Sounding-Horns or Bells, to call out the Slaves to their Work in the Morning; for the Tip-end of the Shell being broken off, till the Cavity appears of about the Bigness of a Mouth-Piece to a French-Horn, they blow into it, and it sounds so loud, that it may be heard in a calm Morning, above a Mile off.

It seems that these were made use of as early as the Time of the *Romans*; for *Perfius* says,

Buccina jam priscos cogeat ad arma Quirites.

Neither was the Use of the Fish unknown to the *Romans*; which appears by the following Lines.

*Lubrica nascentes implent conchyliæ lunæ.
Sed non omne mare est generosæ fertile testæ.
Murice Baiano melior Lucrina peloris.*

HOR.

----- *viles pellent obstantia conchæ.*

HOR.

Manilius likewise very well describes their burying themselves in the Sand; which they do during the Winter Months,

Sic submersa fretis concharum, & carcere clausa.

These are found in great Plenty at the Bottom of the Sea, in about five or six Fathom Water, in most of our Bays; but chiefly to the Leeward of the Island, especially in the Summer-Months.

If the Day is windy, the Divers cannot well see them from their Boats.

To remedy this rippling of the Water, they sprinkle a Spoonful of Oil upon the Surface of it.

This

This for a short time unites the broken Surface of the Water; by which means the Divers can clearly perceive any Object at the Bottom: When the Conchs are thus seen, they dive, and bring them up.

The COW-HEEL CONCH, or HELMET-SHELL.

Buccinum rostratum grande, raris lineis circumdatum, læve, non nisi ima parte cujusque orbis striata. Lift. Hist. Conchyl. Tab. 911.

THIS is often five Inches long; the Outside of a dirty White, and clouded at uncertain Distances with brownish Spots: The first Circumvolution takes up the greatest Part of the Shell: The Lip is not expanded, as in the large grey Conch; but is thickly welted, turning outwards: The inclosed Fish is eatable, as in the former.

The SMALL BROAD-LIPPED CONCH.

Buccinum brevirostrum labrosum crassum nodosum, columella late plana. Lift. Hist. Conchyl. Tab. 989.

THIS Shell is about three Inches long; its Mouth very wide, and its Lips much expanded: The first Circumvolution of this takes up the greatest Part of the Shell.

The SMALL CONCH.

Buccinum minimum oblongum læve, e cinereo & fusco variegatum, riëtū angusto.

THIS is about an Inch long: The Aperture for the Mouth is long, and narrow; the whole Shell smooth and shining, more or less speckled with greyish-white and brownish Spots.

The LARGE BROWN CONCHA VENERIS.

Concha Veneris major fusca, cui maculae fuscae albis circulis circumdatae. Lift. Hist. Conchyl. Tab. 698.

THIS is often near four Inches long, and about half as broad over the Middle, growing bluntly tapering towards both Ends: The Colour of this is of a shining Brown, interspersed with whitish and black Spots: The Slit or Mouth is on each Side dentated.

The

*The BROWN BLACK-SPOTTED SMALL CONCH.**Concha Veneris parva subfusca laevis nigris maculis donata.*

THIS is a very small well-polished Shell, not much exceeding a Quarter of an Inch. Its Back is high-raised, and variegated with blackish Spots.

*The SMALL DARK-COLOURED CONCH.**Concha Veneris subfusca laevis, elato dorso bifasciata.* Liff. Hist. Conchyl. Tab. 670.

THIS is from an Inch to two Inches long, of a dark-reddish Brown: In every thing else it resembles the last-described.

*The SMALL WHITE CONCHA VENERIS.**Concha Veneris alba.*

THIS is a very small white *Conch*, not much above a Quarter of an Inch long: These often go here by the Name of *Rice-shells*, and at a Distance very much resemble that Grain.

The MUSIC-SHELL.

This is what Doctor Lister calls Buccinum musicum grave, faciatum ex lineis quibusdam intersectis, et maculatum, clavicula leniter muricata.

THIS Shell is about two Inches long, and near an Inch broad towards the Clavicle: Its Mouth is large: The Circumvolutions are scarce perceivable, several longitudinal Rifings supplying seemingly their Places: The Shell is thick and ponderous, and of a Flesh-colour, regularly marked with blackish strait Lines and seeming Notes, as if drawn for Music: These are as regularly crossed with other lesser Lines: It is from these that it derives the Name of *Music-shell*.

The BEEF-SHELL.

Patella oblonga, articulata articulis striatis, extus subfuscis, intus e viridi cœruleis.

THIS is from one to two Inches long: The Shell, which is of a blackish-grey Colour, is divided into eight Joints laid over one another: By the Help of these the inclosed Fish can either bend inwardly, or expand and streighten its Shell at Pleasure. The Edges of the Shell are covered over with a greenish strong bearded thread-like Substance: The Fish, which is of a pale-reddish Colour, is very firm eating, short, and well-tasted. These Beeves are likewise distinguished into the Day and Night-Beeves.

The CORNUA AMMONIS.

THESE are properly called *Tubuli vermium albidî, vel e rubro fusci*; and are generally of a dull-white Colour, incurvated in many Revolutions like a Ram's Horn, but far closer together; the small gyral Extremity ending in a Point, the other being sealed or glazed over. There are some to be met with by far less curvated than the above-described. They are often found upon a Place called *Long Bay*, in the Parishes of *St. Andrew*, and *St. Joseph*.

The SEA-EGG.

THESE are distinguished into three Sorts; the black, the grey, and the shooting *Sea-Egg*. The two former are chiefly the eatable Kind: Their Appearance very much resembles an Hedge-hog in a defensive Posture: It is of a globular Form, depressed at both Ends; its Mouth being a small round Hole in the Middle of one of the depressed Surfaces, having five Teeth, the Points of all meeting in the Centre: The whole Shell is very thickly studded round with sharp-pointed Prickles of about an Inch long. These serve as offensive and defensive Weapons, the latter to guard it against the white Gavally, a Fish, which, instead of Teeth, hath strong bony Mandibles, and preys upon Shell-Fish. These Prickles serve also instead of Feet; for, by moving these, it can roll on in an orbicular manner to find out its Prey, or to avoid Danger. These Prickles are jointed to the Shells by a Socket, which exactly fits a protuberant Knob arising from the Surface of the Shell. From the Socket of these Prickles arise likewise many small cartilaginous Sinews, which terminate in the innumerable small Holes, which in a very beautiful Manner perforate the Shell. It is by the Help of these that the Prickles are capable

B b b

of

of Motion. When it moves, which it does but slowly, it seems as if a Grove of Spears was in Motion. The Inside of the Shell is lined with about five Lobes of a granulated yellow Substance, resembling the Roe of a Fish: These Lobes are in Length about three Inches, and in Breadth near an Inch: However, their Bulk depends much upon the Time of their being taken; for these Lobes are larger, and even better tasted, in the (a) Full than in the Wane of the Moon; but if not quickly eaten, or put into strong Vinegar to harden, they very soon dissolve into a rich reddish Liquid: A full-grown Shell is about fourteen Inches in Circumference. The Difference between the black, the grey, and the whitish Sort, is not worth mentioning: However, the black shooting *Sea-Egg* differs from all the rest by the extraordinary Length of its Prickles, and its great Force in darting them to annoy its Enemy; which it does with that Violence, that I have known them to strike or dart them thro' the thick fleshy Part of the Toe-nail of a Fisherman. The *Sea-Eggs* were known to the *Romans*; which appears from the Words of *Horace*.

-----*Miseno oriuntur echinie*

*Horret capillis, ut marinus, asperis,
Echinus.*

Epod. V. 27.

It appears from a Passage in *Lucilius*, that the Antients were not well acquainted with the proper Season for taking this Fish, as being larger and more delicate in the Full of the Moon.

-----*Luna alit ostrea, et implet echinos.*

These *Sea-Eggs* are to be found in the Bottom of fine sandy Bays, in about seven or eight Feet Water. This is delineated in Plate XXVI. Fig. 1. Fig. 2.

The PLATE-FISH, or the FLAT SEA-EGG.

THE *Plate-Fish* hath a flat Shell somewhat dishing inwards on one Side: It is generally from two to three Inches Diameter. The upper and the under Shell are so thin, and so close together, that the inclosed Fish is very small. The several thousand little Holes in these Shells, by which, I suppose, Nourishment is conveyed to the Fish, are no less remarkable for their Number, than their Regularity and Beauty. This

(a) This evidently confutes Mr. *Robault*, who says, that the Moon hath no Influence in replenishing at the Full, or lessening at the Wane, the Meat that is inclosed in these and such-like Shell-Fish.

Shell-Fish is generally found slightly covered with Sand, which I take to be their Security from being perceived by Crabs, Conchs, or other Animals, which prey upon them: Their Surfaces are covered with thick setaceous *Villi*; and the Middle of the Shell is by small Punctures divided into the Appearance of five narrow roseaceous Leaves, as well as four oblong Holes of near half an Inch long, and a quarter wide. Perhaps Nature intended these, that the Fish might fasten itself by them to the Points of Stones or Rocks in the Bottom, lest the Current should drive them away from their Feeding-place, or Place of Safety. Plate XXVIII. Fig. 3. Fig. 4.

The MUSSEL-SHELL.

THIS is not here above an Inch and an half long at most; and the inclosed Fish is proportionably smaller, a dozen of them not weighing an *English* one: These I have found in Beds to the Leeward of the Island in the Parish of *St. Lucy*.

The LARGE WHITE COCKLE.

THESE are found near *Needham's Fort*. The Shell is a great deal larger than that of the *English* Cockle, and flatter.

The RIBBED LIMPET.

THESE are called here the *Nipple-Shell*. Some are of a white Colour, others brownish, and some spotted: There are likewise of these Species some that are smooth.

The THIMBLE-LIMPET.

THIS is smaller, and more compressed, than the last-described.

The ROCK-OYSTER.

THIS is a rocky rather than a shelly Substance. It grows to the Side of mossy Shoals and Rocks at different Distances from the Shore. When opened, they have the Resemblance of a Shell on the Inside, and contain a fleshy Substance, in Taste very much resembling an Oyster, differing very little, if any thing, from the *Mangrove-Oysters* so

so commonly growing to the Roots of those Trees, in several of our *West-India* Islands.

The RED SPECKLED WILK-SHELL.

THESSE Shells are beautifully streaked with small broken Veins of Red upon a white Ground: They are to be found in Plenty clinging to the Rocks on the Leeward-side of the Island, especially in *St. Lucy's* Parish.

The BLUE and WHITE-MARBLED WILK-SHELL.

THIS is of the Make and Bigness of the last-mentioned, and differs only in this, that the white Ground of this is finely speckled with blue broken Streaks: These are likewise found chiefly in the Leeward-part of the Island.

The BLACKISH WILK-SHELLS.

THESSE are of the Bigness of the last described; and I take them to be the same Species, but that the Shells of these are turned black with Age.

PUNCHES.

THESSE long slender Worms are very seldom seen. Their Habitations are innumerable Clusters of wreathed vermicular open-mouthed Tubes, cemented together into irregular Lumps, and sometimes into large Beds many Feet in Circumference: These Tubes differ in Colour, being some of an Amber-colour, some black, and others of a dirty White. The Aperture, by which the Worm enters, is round and open, of the Bigness of a Raven's Quill. The Edges of these Tubes are so sharp, that they will, if trod upon, cut a circular Incision in the Flesh, leaving the middle Space of their Diameters untouched: This Puncture exactly resembles the Impression made upon Leather by an Instrument, which the Shoemakers call a Punch. These are generally found between high and low Water-Mark.

The

The PRICKLY HAM-MUSSEL.

THIS Shell is often eight Inches long, smooth within, and rough without; being studded without jutting seeming Tubes. This is seldom found with Fish in them on our Shores.

The LARGE THREAD-GIRDED COCKLE.

THIS is a large flat Cockle, generally found in the Sand near *Needham's Fort*.

GRATER SCALLOP.

THESE are here but small, and very seldom found on our Shores.

CURL-GIRDED NEEDLE.

THIS is very sharp-pointed, of about two Inches long and wreathed. From the Use made of it, it is often called here *the Tobacco-Stopper*. I have found these upon the green Shoal near *Six Men's Fort* in *St. Peter's Parish*. The Fish inhabiting this Shell, when it moves, carries it upright: When Numbers of these are together, and in Motion, they resemble a Grove of Spears.

TRITON'S TRUMPET.

THIS is the largest, as well as the most beautiful of the Turbinate Kind, and very seldom to be met with upon our Shores: These are beautifully stained with black and white Spots, and the Shell is often nine Inches long.

The *Coccoloba* is often found on the shore at the mouth of the Bay in the Parish of St. Andrew.

The SMOOTH GREY CASKET.

A Small Species of these are often found on our Shores, but seldom any of the large Sort: What are here found are generally of a yellowish dirty-white Colour.

The SPIRE-SHELL.

THESE are generally small, and very smooth, of a reddish Brown, spotted with Black. There are others of a Pale White, spotted with Black; both Sorts generally well polished. These are very common upon almost all our Shores.

The WELTED CASKET.

THIS is generally of a brown Colour, and furrowed length-ways: It is of a far stronger Consistence than the last-described.

The GREY CASKET.

THIS is generally of a grey Colour; and sometimes they are found of a brownish Grey. Their Texture is generally very thin.

The WHIRLIGIG.

THIS is generally of a bluish Colour, and is often found upon the several Shores of the Island.

The KNOBBED TRUMPET.

THIS Shell is of a dirty White, as well as some of a brown Colour; and found in many of our Bays, but not in great Plenty.

The SMOOTH-LIPPED CASKET.

THIS Shell is often found on the Shore at *Maycock's Bay* in the Parish of *St. Lucy*.

AGATE-STAMPER.

THIS Shell is from half an Inch to two Inches in Length, generally of a reddish Brown spotted with Black : They are likewise found of a pale-white as well as bluish Colour, and very common upon the Shores of this Island.

The ROYAL STAIRCASE.

THIS is a small white spiral Shell, belted with a sharp rising Ridge from the Top to the Bottom in the Form of a wreathed Staircase.

The SPOTTED CYLINDER-SHELL.

THIS is about two Inches long, of a dirty Colour, white speckled with sometimes black, sometimes brown Spots.

The BROWN CYLINDER-SHELL.

THIS is thin, and well polished ; seldom longer than two Inches, and of a reddish-brown Colour.

The MOLE COWZY.

THIS is very seldom found on the Shores of this Island : What I saw was three Inches long, of a brown Colour, and faintly spotted with Black.

The TRIANGULAR STRIATED BUCCINUM.

THIS is a middle-sized Shell, thickly labiated, and pretty sharp-pointed ; the several *Striæ*, on the Back-part especially, running transversely and deep.

The

The TOP-SHELL.

THIS is a large Shell, spotted most commonly with Blue and White, sometimes with Red and White: When this rough outside Coat is taken off, the inner Part consists of fine Mother of Pearl. The Mouth-piece, or Cover of the Mouth, is of an horny Substance, of a brownish-black Colour, incircled with several Ringlets of a Gold-colour. These are generally found in deep Water, and in great Plenty in the Sea, opposite to *St. Lucy's* Parish. The last Stage of an *Hermit-Crab* or *Soldier* is, to inhabit one of these empty Shells.



THE



THE Description of our several exanguious Tribes of Animals being completed; our next Inquiry will naturally fall upon our Submarine Plants. I shall divide these into three Classes: The First and most perfect is the large black Sea-Rod, which often grows to the Height of a small Tree; this, as well as each of this Species, is smooth, black, and shining, of a very tough Substance, somewhat between Horn and Wood, smelling strongly of the latter when burnt. The Second is very bushy, seldom exceeding four Feet in Height; its very numerous Branches arise almost together from very near the Root, and are in general of an equal Height and Bigness: This differs from the naked black Sea-Rod, by having their Surface covered with a calcareous Crust (of about the Thickness of an *English* Shilling), and here and there marked with Asterisks; the inner Texture of the Plant being of the same Nature as the above described. The Third and last are all Kinds of Coral-line Bodies.

The LARGE BLACK SEA-ROD.

THIS often grows to about fifteen Feet high, and always in a considerable Depth of Water; its Branches are few, but strong and tapering; the Outside appearing almost as smooth, black, and shining, as Ebony; and if first boiled in fresh Water, and afterwards often oiled, they will be very pliable and tough, and make very beautiful Switches.

The LESSER SEA-ROD.

THIS is a slender small black Rod, having a great many very small weak undivided Side-branches. This Species grows between high and low Water-Mark in the Clefts of Rocks, seldom rising above five Foot high.

The SEA-FEATHERS.

THESE seldom grow, on the Shores of this Island, above two Feet and an half high; they likewise seldom or never differ in their Make or Texture, being each composed of a ligneous horny Substance, and beautifully reticulated. Some are of a darkish Colour, and others of a light Grey: I observed some of the latter to have their Edges bordered with a faint Yellow, slightly tinged with Green.

The INCRUSTED SEA-RODS.

THESE are always in Bunches, seldom growing above four Feet high; their many Branches spring from one common Stalk, very near the Root: These are almost all of a Size, in Length and Thickness; and the Outside covered with a calcareous Crust, of about the Thickness of an *English* Shilling. The Surface of this is pitted with many very small Star-like Holes. This is delineated in Plate XXVII. Fig. 1.

The SMALL INCRUSTED SEA-ROD.

THIS seldom grows above a Foot and an half high; and its Surface, instead of being, as the last-described, covered all over with a thin pliable calcareous Crust, is here-and-there annulated with irregular knotty Bandages, of a white coralline Substance, resembling the small Star-Coral. This Kind of Sea-Rod branches very little, and its Branches are but very slender.

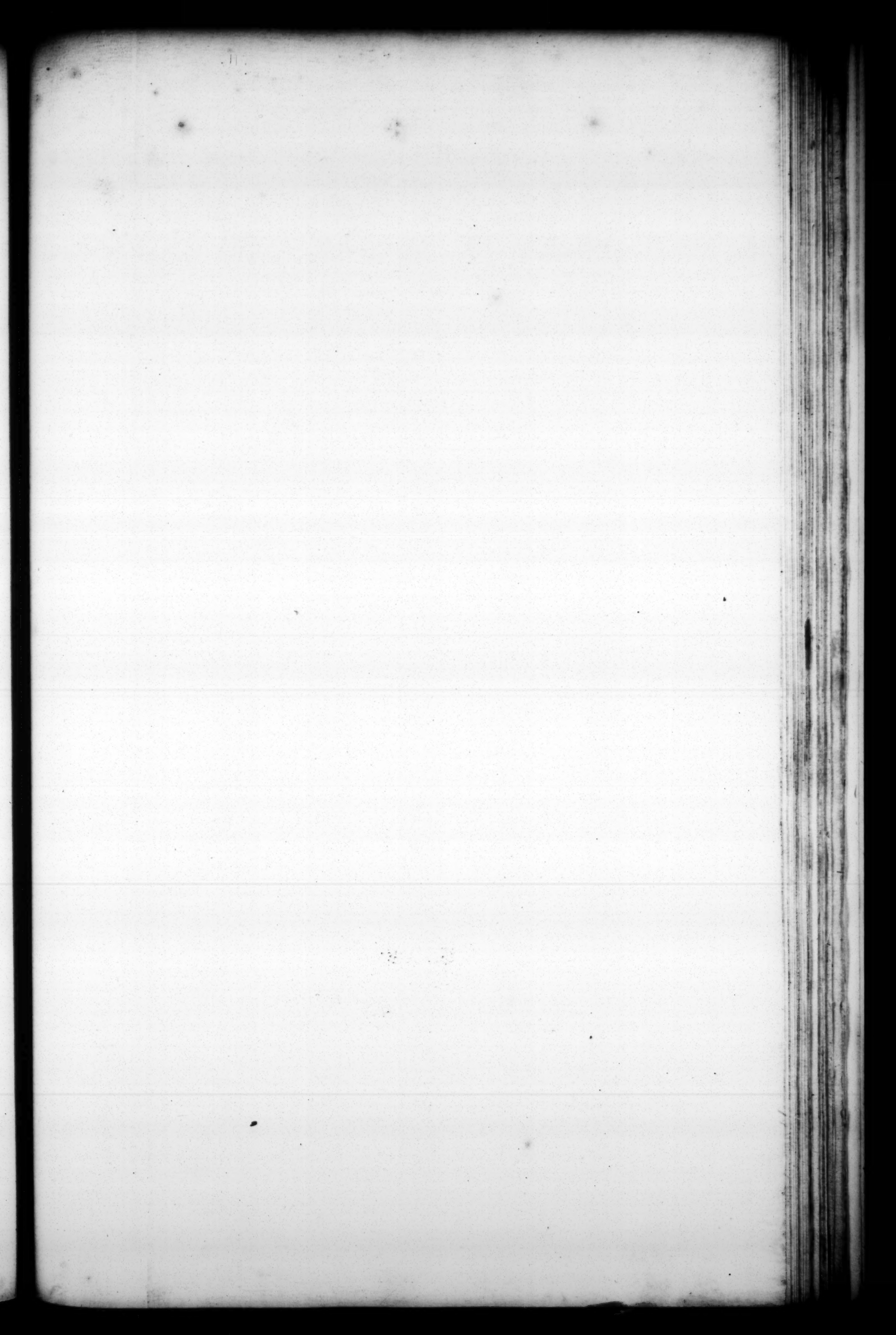




Fig. 1

Fig. 2



To the Right Hon.^{ble} the
Earl of Sandwich,
First Lord of the Admiralty
This Plate is humbly inscrib'd,



O F

C O R A L S.

THOUGH these, in general, are Vegetables; yet we are not to look upon them among the lowest Class of this Kind, because they bear, at least here, neither Leaves, Flowers, nor Fruit, having likewise their Consistences so brittle, that they are neither malleable, nor any ways pliable: However, their innumerable Shoots and Branches are not void of Beauty, nor useless in medicinal Preparations; the white Sort being, when pulverized, esteemed good to free the Stomach from acid four Juices; and the red Coral is not less efficacious in stopping Fluxes: From the Growth of these, we may likewise observe, that Providence is not tied down in its Operations to mechanical Rules: For among Vegetables, which flourish upon the the Surface of the Earth, all our Art and Contrivance are in vain, unless we can procure them either natural or artificial Heat, and a Communication of Air; whereas these grow to a great Length in above forty Fathom Water, where the Heat of the Sun cannot penetrate.

I shall begin the Description of Corals with that called the *Harts-born Coral*.

The SEA-GINGER, *or the* PALMED HARTS-HORN.

THIS is a digitated Sea-Coral, and is called Ginger from its very hot Quality; for if a Piece, newly broken, be apply'd to the Tongue, it tastes excessively hot. It is found in great Plenty upon the Shores in the Island of *Antigua*, as well as among many other Places upon the *Pelican shoal* in this Island.

This is delineated in Plate XXVII. Fig. 2.

The

The HART'S-HORN CORAL.

THIS takes its Name from the great Resemblance its wide-extended Branches have to an Hart's-horn, both in Colour and Shape: They grow upon Rocks, at different Depths under Water: The Branches are of a brownish White, but always at the Top sharp-pointed, and tipped with a clear White: They are of so close a Texture, that, when struck by any Piece of hard Wood or Iron, they afford a metallic vibrating Sound: This Sort grows to be often above five Feet in Length. I have likewise seen a lesser Sort, resembling the palmed Hart's-horn.

The PAN SHOAL, or HONEYCOMB STONES.

THESE are to be found under Water at different Depths, from two to twenty Feet: Their Shape generally resembles a Honeycomb, and that not only as they are broad with a similar Thinness, but likewise as they are full of Holes: Several of these, especially near the thickest Edge, are cemented, or, as it were, waxed over, exactly resembling that Part of an Honeycomb which is filled with Honey. From the Stone when broken, drops a liquid Substance of the Consistence of thin Oil. These in few Years grow to a considerable Bigness, and are to be found upon almost all the Shores, more particularly at a Place in *St. Lucy's* Parish, called *Fryer's Well*.

The WHITE CORAL.

THIS Coral is found upon the Shores of most Bays in the Island: The Stars are composed of so many thin Partitions; the intermediate Space, between each Line, hollow; and the solid waved Interstices of the Coral-smooth, hard and well-polished: These intervening Ribs rise higher than the Star-like Resemblances.

This is delineated in Plate XVII. Fig. 7.

The MILLIPORA PERFORATA.

THIS is all over perforated into innumerable small Holes, generally of an equal Size: I am of Opinion, that these Holes were formerly filled with star-like Substances; but, as the Rays which compose these, are from their softer Texture, as well as their hollow Interstices, less able to bear the violent Tossings of the Waves against the sharp-pointed Rocks, that these Stars, in time, were so intirely broken, nothing now remains, but the Holes which they once occupied, among the stony Ribs.

The

The LARGE WHITE FINE-RAYED STAR-CORAL.

THIS is very often of a considerable Bulk; and its Surface thickly crowded with very small Stars, whose Rays are scarce perceptible to the naked Eye.

The KNOTTY STAR-BEAMED CORAL.

THIS is to be found on all our Shores, and very much resembles that of the same Class found in the *Mediterranean* by Dr. *Shaw*, with this Difference only, that the Extremities of this are of a blunt conic Shape.

The TUBULAR CORAL.

THIS spreads into several thick short Branches studded all over with innumerable small open-mouthed Tubes, the Whole generally of a brownish Colour without, and white within.

The COMMON BRAIN-STONE CORAL:

Fungus coralloides encephaloides, gyris in medio sulcatis, lamellatis, ferratis. Boerh. Ind. Plant. p. 1.

Lapis fungites cerebriformis. Ray's Hist. App. p. 1850.

THIS, as do many others of the same Species, derives its Name from its Resemblance to the human Brain, the waving white Ribs rising higher than the intermediate Spaces: These Stones are to be seen very common on all our Sea-shores, as well as on the Land, especially about *Black Rock*, in *St. James's Parish*, and generally near the Sea.

The LARGE-RAYED BRAIN-STONE.

Fungus coralloides, laminis magis undulatis. Boerh. Ind. Plant. p. 2.

THIS hath its several sinuated Rifings and Depressions intirely rayed, whereas these Rifings in all other Kinds of *Brain-stones* are so many solid Veins dividing the porous Part into many sinuated Interstices.

What is called here the fine ribbed *Brain-stone* differs from the above by having many hard sinuated Veins running through it, and rising higher than its porous Interstices.

E e e e.

The

The SMALL STAR-CORAL.

THIS differs from the last described, by having its Stars even with the Superficies of the intervening Ribs.

The VERY SMALL STAR-CORAL.

Fungus coralloides, stellis minoribus, rupibus corallinis accrescens. Boerh. Ind. Plant. p. 2.

THE Surface of this is almost intirely covered with the Appearance of very small Indentings like Stars.

The LARGE STAR-CORAL.

THE Surface of this is indented with the Appearance of Stars, far larger than those already described.

The WIRE-SPONGE.

THIS is of the Sponge-kind, though it hath no Elasticity: Its Substance is far more reticulated than any other Sponge: It grows chiefly upon the broken Stumps of Sea-Rods: It generally grows of a cylindrical Form, and hollow in the Middle: It is of the Colour of a common Sponge, and its Parts are as stiff as if they were composed of very fine Wire.

The SOFT SPONGE.

THIS Class cleave to the Rocks, or rather grow from them, as *Jews-Ears* do from Trees.

The BEAMED CORAL.

Madrepora ramosissima fusca, halcyoniis et ostreis accretis insignis. Boerh. Ind. Plant. p. 5.

THE Specimen I saw here has no Oysters or *Halcyonia* on it; but it hath a fine brown *Tubulus Marinus*.

I SHALL conclude this Book with the Description of that surprising Creature the *Animal Flower*, first observing that the remarkable Place called the *Spout*, in *St. Lucy's* Parish, is a large Hollow under a rocky Cliff impending over the Sea: As the Waves continually rush with a violent Force into this hollow confined Part, it throws upwards, through an Hole in the Surface of the Rock, a considerable Body of Water, from fifteen to fifty Feet high, containing several Hogheads. It may be seen at several Miles Distance.

T H E

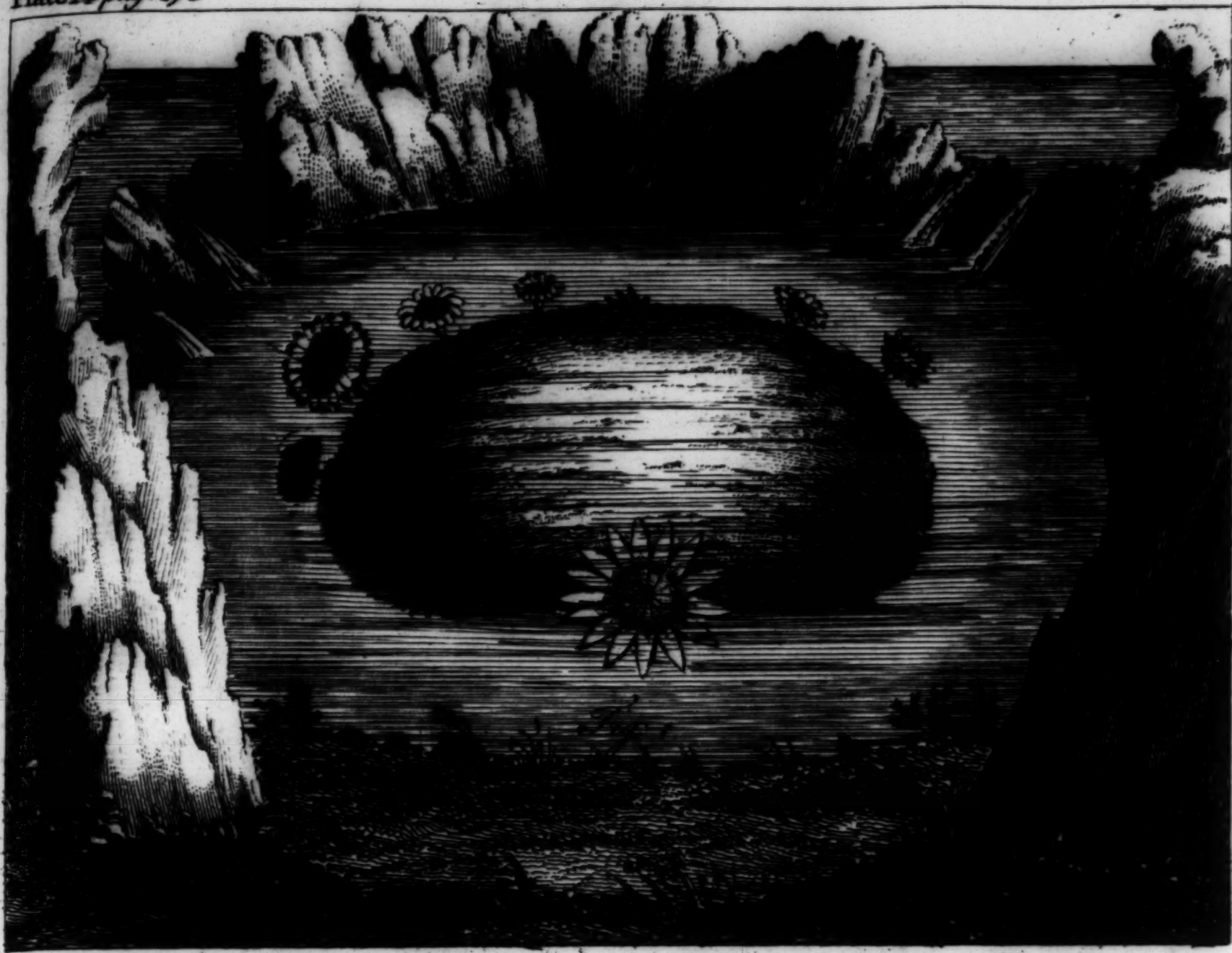


Fig. 2.

To the Right Honourable
the L^d CHANCELLOR of G^t BRITAIN.
This Plate is humbly Inscrib'd
&c.



T H E

ANIMAL FLOWER.

AS in Man, the most perfect Part of the sublunary Creation, there are apparently seen several different Degrees of Perfection of Body and Mind ; and in Animals the Sagacity of some is evidently superior to that of others ; so likewise in this seemingly confused Species of animal Life, and vegetable Appearance, the Chain gradually descends with a surprising Mixture and Connexion.

Whoever hath Leisure and Abilities to pursue a general Inquiry of this Nature, will soon find, that this progressive Series runs through the whole Creation ---- From the most exalted Genius to the almost senseless Idiot ---- From the most sagacious sensible Creature to the almost insensible Muffel ---- From the towering Cedar to the Hyssop springing from the Wall, or the humble Moss.

Such is that universal Harmony and Connexion, that runs through the numberless Ranks and Orders of Beings, till we come at last to inanimate Matter.

This surprising Creature, that I am to treat of, hath, for a long time been the Object of my own silent Admiration ; and it would even now be thought chimerical to mention, much more describe, the Qualities of so strange a Phænomenon, if the *Polypus* of late Years had not afforded a surprising Instance of Almighty Power.

The Cave that contains this Animal, is near the Bottom of an high rocky Cliff facing the Sea, in the North Part of the Island, in the Parish of *St. Lucy* : The Descent to it is very steep and dangerous, being in some
 I Places

Places almost perpendicular ; and what adds an Horror to this dreadful Situation, is, that the Waves from below almost incessantly break upon the Cliff, and sometimes reach its highest Summit.

As soon as you are freed from this complicated Apprehension of Danger (in your Way down) you enter a Cave spacious enough to contain five hundred People. The Roof of this is in some Places imbossed with conglaciated Incrustations intermixed with small Tubes, through whose Extremities a small Quantity of the most limpid Water drops.

From this you enter another Cave, small in Comparison of the former. The Bottom of this is a natural Bason of Water of about sixteen Feet long, and twelve in Breadth. This, at low Water, is about eleven Feet perpendicular Height from the Sea, which, when the Wind is high on that Point, dashes into it ; so that the Water in it is intirely salt, except a small Mixture of fresh, which ouses and drops through the Roof of the Cave.

In the Middle of this Bason there is a fixt Stone, or Rock (as I shall call it), which is always under Water.

Round its Sides, at different Depths (seldom exceeding eighteen Inches) are seen at all Times of the Year several seemingly fine radiated Flowers of a pale Yellow, or a bright Straw-colour slightly tinged with Green.

These have in Appearance a circular Border of thick-set (1) Petals, about the Size of, and much resembling, those of a single Garden Marigold, except that the Whole of this seeming Flower is narrower at the *Discus*, or Setting on of the Leaves, than any Flower of that Kind.

I have often attempted to pluck one of these from the Rock to which they are always fixt ; but could never effect it. For as soon as my Fingers came within two or three Inches of it, it would immediately contract, and close together its yellow Border, and shrink back into the Hole in the Rock ; but, if left undisturbed for the Space of about four Minutes, it would come gradually in Sight, expanding, though at first very cautiously, its seeming Leaves, till at last it appeared in its former Bloom : However, it would again recoil with a surprising Quickness, when my Hand came within a small Distance of it.

Having tried the same Experiment by attempting to touch it with my Cane, and a small slender Rod, the Effect was the same.

These were strong Appearances of Animal Life ; yet, as its Shape, and want of local Motion, classed it among Vegetables, I was for some time in Suspense, and imagined it might be an aquatic Sensitive Plant : And though its Contraction to avoid the Touch was quicker than any Plant of that Kind ; yet, as its seeming Leaves might be, and in reality

(1.) Petals are the fine coloured Leaves, which compose in a Marigold, and such-like Flowers, the yellow circular Border.

They are called Petals to distinguish them from the green Leaves of the Plant.

were, of a far thinner and more delicate (1) Texture than those of any Plant ; and as Water is eight hundred times heavier than Air, the sudden Weight of so thick a Medium, by its Undulation caused by the Pressure of my Hand or Stick, might very well account for its sudden Contraction.

This was my Opinion, till a subsequent Visit cleared my Doubts ; for I plainly saw four dark-coloured Resemblances of Threads something like the Legs of a Spider, rising out of the Centre of what I have termed a Flower. Their quick spontaneous Motion from one Side to the other of this circular yellow Border of seeming Leaves (which in reality were so many Arms or Feelers), and their closing together in Imitation of a *Forceps*, as if they had hemmed in their Prey (which the yellow Border likewise soon surrounded and closed to secure), fully convinced me, that it was a living Creature.

Its Body at a Distance appears to be about as big as a Raven's Quill, and of a blackish Colour ; the one End sticking to the Rock, the other extending a very small Distance from it ; and incircled round with a yellow Border, as above described.

Thus what in its first Appearance seems to be of the vegetative Kind, by its Motion, and quick Sense of Self-preservation, proves an Animal.

Now, since the same Wisdom and Goodness, which give Being to Creatures, often preserve them in that Existence by Ways and Means as wonderful as their Creation was before ; this leads me to offer a probable Conjecture, why God's amazing Providence (which doth nothing in vain) endued the Arms or Feelers of this Animal with a fine yellow Colour, and hath ordained it to differ in this Particular from the several Tribes of fungous Animals, that are always found cleaving to the Rocks in the Sea.

As these latter may be fed with Spawn, or some Animalcules, which the Flux or Reflux of the Waves may throw in their Way, there was no Need of any uncommon Means to intice their Prey (if Animals) within their Reach ; whereas the Water in the Cave is, for the most part, void of any Motion that can convey Food for these Animals. Therefore there was a Necessity of some extraordinary Temptation to allure their Prey within their Power, to seize it ; otherwise they might starve in the midst of Plenty.

To this End, that Divine Goodness, which filleth every thing living with Plenteousness, hath finely devised this providential Stratagem (if I may

(1) Tho' I could not by any means contrive to take or pluck from the Rock one of these Animals intire ; yet I once cut off (with a Knife which I had for a long time held out of Sight near the Mouth of an Hole, out of which one of these Animals appeared) two of these seeming Leaves. These, when out of the Water, retained their Shape and Colour ; but, being composed of a Membrane-like Substance, surprisngly thin, it soon shriveled up, and decayed.

be allowed the Expression), and given these Animals that fine transparent Colour, to be a Means to provide for them their daily Food: For as bright Rays of Light (or something similar in its Effect) are very inviting to several Animals, especially those of the aquatic Kind, the beautiful Colour of this circular Border may serve as a Decoy for very young Fish, or other Animalcules, to divert themselves (as Flies about the Flame of a Candle) in swimming about the Verge of this seemingly harmless Flower, until they come within the Circle; then these bright Leaves in Appearance prove, in Reality, so many Arms or Feelers, that with a quick Motion close together, and surround the Prey; which, being thus secured, is conveyed to the Mouth, as above-mentioned.

There are likewise on the uppermost Part of the Rock, in the above-described Basin, innumerable Clusters of (what are here called) Water-Bottles, very much resembling scattered Clusters of unripe Grapes; the Outside consisting of a bluish skinny Tegument, like that of a Grape; the Inside full of Water somewhat turbid.

Among these also are a great Number of Animal Flowers of the same Species with the yellow large ones. These now to be described are likewise fixt to the Rock, not in Holes, as the above-mentioned, but sticking to the Surface among these Water-Bottles, and generally not above nine Inches under Water.

The Leaves, or rather Feelers, of these are of a greyish-purple Colour variegated with black Spots. Their Motion likewise to avoid the Touch is not so quick.

Having plucked one of these from the Rock, I perceived the Body, which was about an Inch long, to have, whilst between my Finger and Thumb, a sensible vermicular Motion. The Feelers likewise, which decorated one End of it, when exposed to the Air, shrunk up, and remained as lifeless: But as soon as the Whole was dipped in their proper Element the Water, they would immediately, as it were, assume a new Life, and appear again in their full Vigour.

Soon after the Discovery of these surprising Animals, a great Number of People came to view them: But as this was attended with some small Inconveniency to a Person, thro' whose Land they were obliged to pass; he therefore, to get rid of the Company, resolved to destroy the Object of their Curiosity: In order to do so effectually, he took a Piece of Iron prepared for that Purpose; and then carefully bored and drilled every Part of the Holes where these seeming Flowers were bred; but, to his great Surprise, they in a few Weeks appeared again issuing from the same Holes.

Let us here, for awhile, stop, and see whether our much boasted Reason can find out how even a latent Principle of Life can be preserved, after the whole organic Body is torn in Pieces.

When we see this Animal, in a short time after, resuscitate, and appear in its former Proportion, Beauty, and Life, can we, after such an ocu-

lar Demonstration of so astonishing a Change in a Creature destined for this Life only, and removed (in all Appearance) but a few Degrees from the vegetable Creation, any longer entertain Doubts about the Possibility of another Doctrine of a far greater Consequence? And as every past Age hath been, so undoubtedly every future will be, blessed with some surprising new Discovery of God's unsearchable Power and Wisdom.

Our own hath produced a wonderful Instance of this; for what Sceptic, some Years ago, would have believed the Possibility of so extraordinary a Production as the *Polypus*? Who would not have said, with the unbelieving *Jews* in the Wilderness, Can God do this? And yet we find, that this surprising Generation is now a known Matter of Fact.

That the above-mentioned Conjecture about the Use and Efficacy of its Colour is not groundless, may be made still more evident, by many analogous striking Instances.

For those ingenious Gentlemen, Mr. *Turberville Needham*, and Mr. *Trembley*, observe, that Polyyps, and aquatic Insects, kept in Glass Vessels, by excluding the Light from every Part, except one little Opening, after some time all assembled at this Opening; and yet these Polypes have not, perceptibly to the strongest Magnifier, any Organ that in the least resembles Eyes.

If Light is therefore so attractive to these Animals which are visible, why may it not be likewise so to other Animalcules to us imperceptible? And may we not further suppose, that the Appearance of the former towards the Light may be in Search of these Animalcules, their destined Prey?

But in what manner the Rays of Light affect these Animals, whether by its Motion acting upon their whole exceedingly delicate nervous System, which, like the *Retina* of the human Eye, is in every Part sensitive, is, I believe, inexplicable.

Where Sight is apparently wanting, as in Polyyps, a Delicacy of Touch may, for ought we know, and indeed in all Probability doth, take up the gradual Chain, and, in a surprising manner, supply its Place.

Such is the insensible Gradation, which is progressively continued by imperceptible Degrees thro' the whole Creation, from animate to inanimate, rational to irrational, that we know not where precisely to determine their respective Boundaries. In like manner, Light and Darkness, Motion and Rest, we speak of as Things very different and opposite: Yet no one will presume to say, what is the precise and absolute Boundary between languid Motion, and absolute Rest; or determine the Period where the last dying Sound expires in dead Silence.

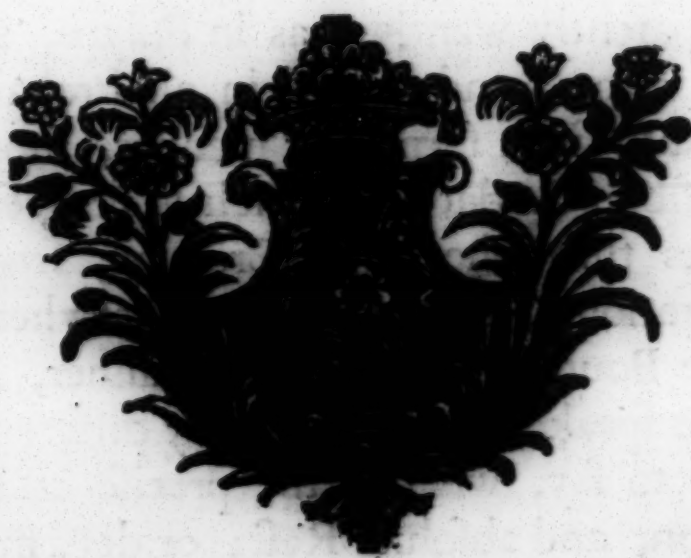
And perhaps this gradual Chain and Connexion terminates not with sublunary Things; but may be progressively continued far above the Ken of the most exalted Genius, or even the Comprehension of perhaps celestial Beings, till all created Perfection is lost in him, who is Perfection itself.

This

This Animal, and the Cave containing it, are delineated in Plate XXIV.
Fig. I.

The SMALL BLUISH ANIMAL FLOWER.

THESE grow in Clusters upon the Rocks between High and Low-water Mark. The Edges of each are composed of a circular Border of small fistular thread-like brown Petals (if I may so call them) surrounding a fungous Substance, of about the Breadth of an *English* Silver Two-pence, and of a bluish-green Colour. This Species is by far less quick in avoiding approaching Danger than those already described; consequently their Organs of Sensation are less perfect; for they will suffer themselves to be touched, before their guardian Petals or Arms close together to defend or preserve the Whole. I have observed a larger Sort of the same Species, having their brown Petals or Arms longer than the above-described, as well as of an irregular unequal Length: These likewise gradually lessen in their sensitive Perfection, and are generally found at some Distance under Water, whereas the former, in Neap Tides, are often for a short time exposed to the Air, and that seemingly without any Prejudice.



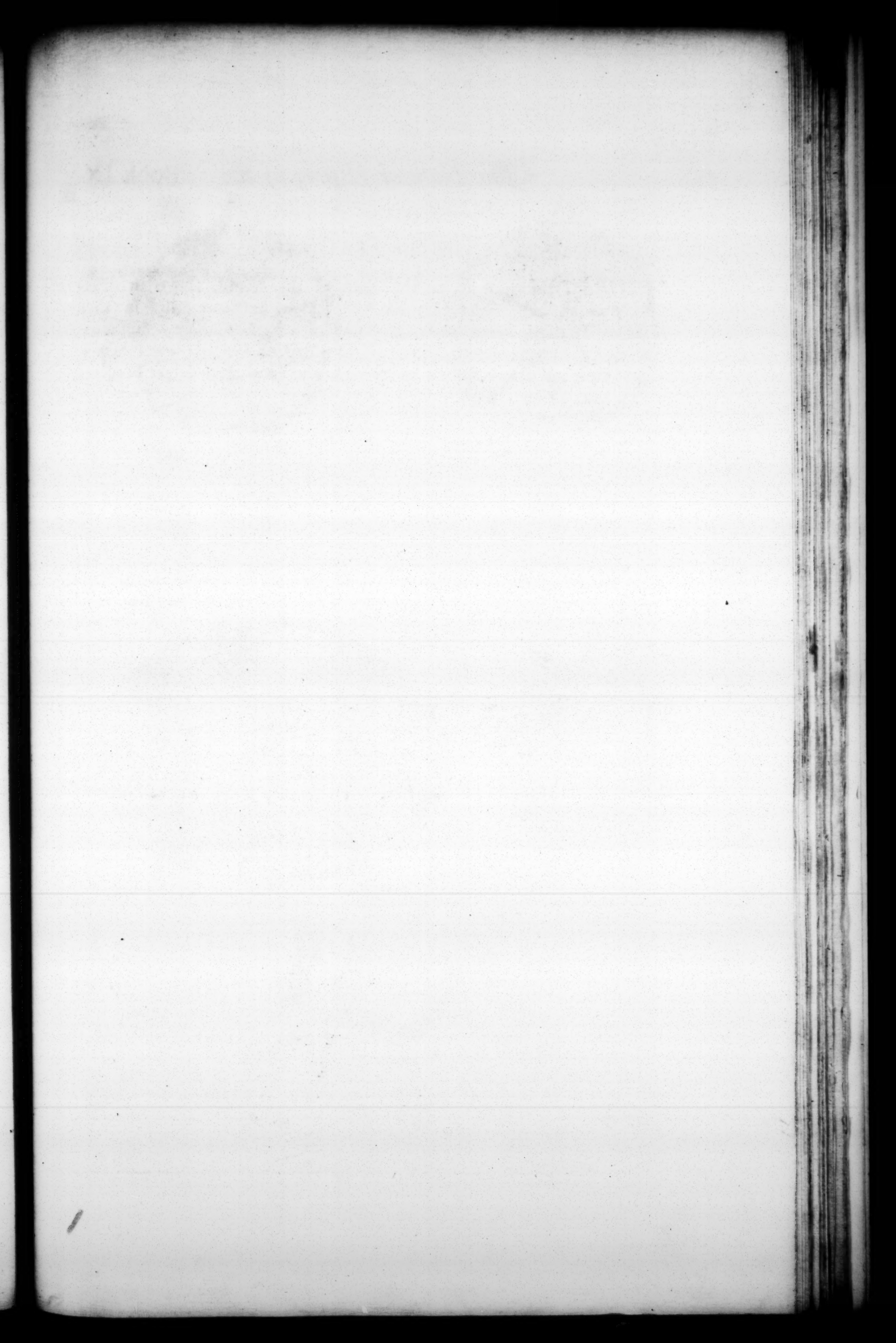


Fig. 3.



Fig. 4.

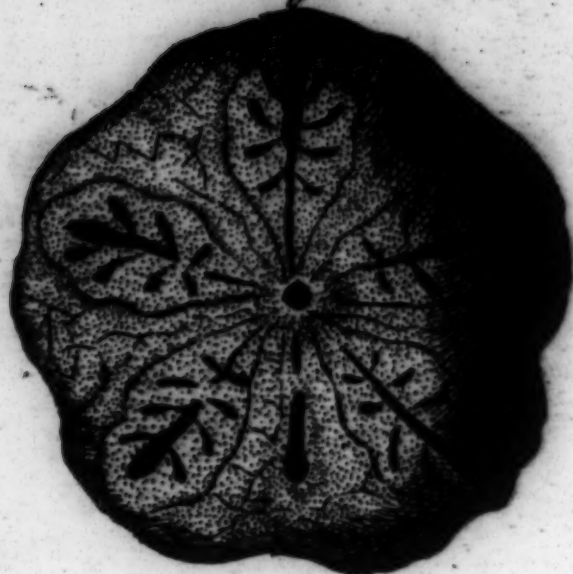


Fig. 1.

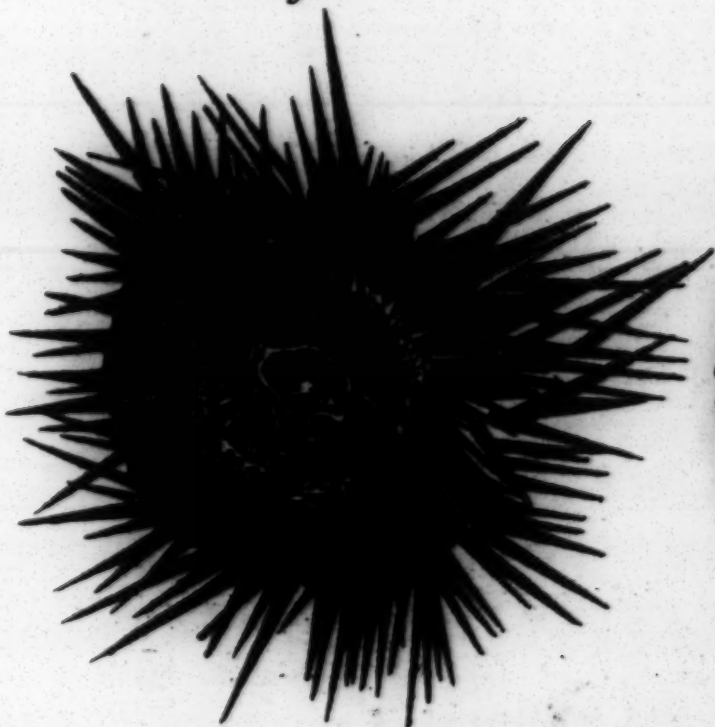
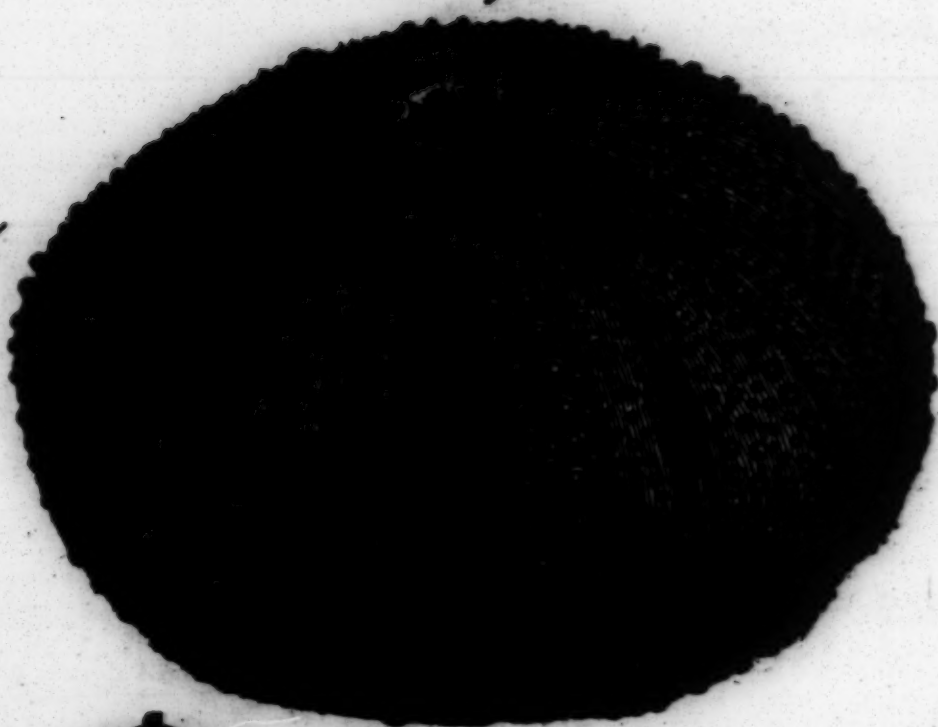


Fig. 2.



To His Grace The DUKE of BEDFORD
This Plate is humbly Inscribed
&c



THE

NATURAL HISTORY
OF THE
Island of BARBADOS.
BOOK X.
Of the SEA and its INHABITANTS.



As the Earth is full of God's Riches, so is the great and wide Sea, wherein are Things creeping innumerable, both small and great. We are no sooner advanced to the Shore, at least a few Yards farther upon the smooth Surface of the Water, on the West Side of this Island, but we are, especially in calm Mornings and Evenings, pleased with the Sight of several Groves of Coral, Sea-Feathers, and Sea-Rods; the former grow in thick Clusters, yielding an imbrowned Shade, and remain as sturdy Oaks unmoved; the latter, with their numerous, pliant Branches, wavingsly bend with the undulating, flow Motion of the Water. The interspersed, vacant, sandy Spaces resemble so many bright Lawns which please with a Kind of regular Confusion.

G g g g

The

The Whole is made more grateful still by the Sight of numerous Tribes of Fishes, which either feed upon, or wantonly skim the Surface of the deep Water, or lie groveling at the Bottom.

There the bulky *Conch*, as it moves, is seen to furrow the glittering Sand ; and the Warlike *Sea-Egg* slowly waves its thousand Spears.

A Scene of this Nature cannot be better represented than in the Words of *Milton* :

These

*With their Fins, and shining Scales
Glide under the green Waves in Sculls that oft
Bank the Mid-sea : Part single, or with Mate
Graze the Sea-weed, their Pasture, or through Groves
Of Coral stray, or sporting with quick Glance
Shew to the Sun their waved Coats dropp'd with Gold.*

As the Inquiries we have made in the foregoing Books have sufficiently convinced us, that Nature hath provided terrestrial Animals, some with Strength, others with Swiftneſs, and even the weakest and feebleſt of the exanguious Tribes (ſeemingly the moſt helpleſs and imperfect) with ſome Skill or Contrivance to preſerve its Species ; ſo we ſhall be no leſs agreeably ſurprized to find that the ſame Divine Power is not leſs conſpicuous in the Make of the Inhabitants of the wide-extended Ocean, from the huge *Leviathan* to the ſmalleſt Fry. Each Individual is not only adapted, by its Blood and Juices, to the Element they are in ; not only taught to propagate their Species, but alſo to preſerve them from their Enemies ; for the Lamb flies not the Wolf with greater Dread than the *Flying-Fiſh* doth the *Dolphin*, and that in like Manner its Enemy the devouring *Shark*.

It is remarkable in the *Flying-Fiſh*, that theſe, whiſt ſmall and unfit for Uſe, are never ſeen near the Shores ; and the few that accidentally appear, avoid the Bait or Net with a ſurpriſing Shyness ; but when full grown, and in Perfection, they croud to a convenient Diſtance from the Shores, and by their Tameneſs court, as it were, the deſtroying Hand of Man ; for they will neither fly out of his Way, as they do from the *Dolphin*, nor will they dive into the Deep ; but ſuffer themſelves to be taken up with the Hand, or with a ſmall Hoop-net, which is the common, and moſt expeditious Way of taking them.

Many have been the fruitleſs Inquiries to find out the certain Periods and Cauſes of the various and oppoſite Sea Currents, ſo remarkable near this Iſland. As I have obſerved theſe to be higher and ſtronger at the Full and Change of the Moon, as well as more rapid, and more inclined to the Northward, this induced me to believe that, tho' the primary Cauſe of the Current, as well as the higher Flow of the Water, at ſuch Times, is owing to the Influence of the Moon ; yet the Byaſs of this Current, more to the Northward than to any other Part,

Part, is occasioned by the Nearness of the South-West Continent of *America* to this Island, and the Remoteness of the Continent on the North-East, or opposite Part from it.

For, when the Waters at these Spring-Tides are elevated, and depressed, by Turns, by the Influence of the Moon, they will naturally recede towards that Point where they meet with the least Resistance; therefore, tho' the Course of the Current may, and often doth, run towards the South-West; yet, as soon as it is resisted by the Continent of *America*, on that Point, which is not quite three hundred Miles distant from this Island, it recoils back with redoubled Force towards the opposite Point, which is the North-East; and, as it meets there with no Resistance, 'till it comes to the Continent of *Africa*, which is about two thousand Miles distant from this Island, it is no Wonder that the Current, especially in the Decrease of the Moon, is more inclined that Way; and, when it varies from these Courses, it may be attributed chiefly to the Change of the Wind from the true Trade Easterly Winds to the South-West; or perhaps to the great and violent Land-Floods from the many and large Rivers from the neighbouring South-West Continent of *America*, which may sometimes byass these Currents.

It hath been observed by many Writers, that the Sea-water is saltier in these hot Climates than in other Northern Seas. This Difference the ingenious Mr. *Robault* says, arises from hence, viz. "That the Sun's Heat, being more intense near the Equator than in those Seas which are at a greater Distance from it, a much greater Quantity of fresh Water must continually ascend up in Vapours, than elsewhere; which do not often descend again in Rain, 'till they are carried to a great Distance from thence: so that there being a less Quantity of that which temperates the Salt to be found in those Seas which are between the two Tropics, than in those Seas which are in the frigid and temperate Zones; it is no Wonder if their Waters are saltier." And he likewise adds, "That the Ocean is of much larger Extent between the Tropics than any where else, and yet there are fewer Rivers that discharge themselves into it."

The Cause of the Water's greater Degree of Saltiness in these Parts, being thus explained, the Wisdom of such Allotments of Providence will soon appear, when we farther consider, that as the calm Latitudes are within the Tropics, therefore if the Sea was not much impregnated with Salt, its Surface in those Parts, called the calm Latitudes, would in all likelihood stagnate, and send up so many impure and stinking Vapours, that it would infect not only those but the adjacent Climates with Distempers, perhaps very little less pernicious than the Plague itself.

Of all the Fish caught in our adjoining Sea, I shall take notice of such only, as have been either insufficiently described, or whose Descriptions have been totally neglected by other Authors. Among the former is the following.

The

The TOAD-FISH.

THIS Fish, which is the Dread and Terror of Fishermen, is no less ugly in its Shape, than mischievous by its Prickles; its Length in general, is from Eight to Eleven Inches; the Colour of the Skin, is of a brownish-red, intermix'd with blackish Spots; the Head is very large, in Proportion to the rest of the Body, and almost intirely cover'd with sharp Prickles; the Eyes are pretty large, incircled with a white Iris; its Back is remarkably arm'd with a Row of very sharp Prickles; these, when the Fish is neither in an offensive nor defensive Posture, are almost couchant; and, to prevent their Points being by any Accident blunted, they are sheath'd in a strong muscular Membrane, or Web, dividing each Prickle. When the Fish is disturb'd, this Skin or Membrane is immediately contracted, and lies in Folds close to the Back, so that almost the whole Length of these Spears are then unsheath'd, and better fitted to make deeper Wounds, than if the Web had been immoveable, as it is in almost every other Fish, guarded for common Defence with Prickles. When these Spears are erect, if the unwary Fisherman treads upon it, (for it will not attempt to get out of his Way,) gives a strong Flutter with its Fins, and strikes or darts them into his Foot: the Pain that immediately ensues, is not to be described, being so very violent for the Time it lasts, (which is generally 'till the same time of the next returning Tide) that the Agonies they endure are inexpressible: And as few, (if any) that have been once wounded, will be so hardy as to venture a second Time to the Sea, without being first guarded; perhaps the Proverb, *Ictus Piscator sapit*, might have its Rise from hence; especially if these Fish are in Plenty upon the *Italian Shores*. It is observ'd that the Part affected near the Wound turns livid; but, if the Liver of the Fish be immediately applied to it, it gives Ease in some small Degree. This I take to be owing to the Oyliness of the Liver, which blunts the Spicula of the poisonous Particles; for I am very confident, that this severe Pain doth not proceed from, or is occasion'd by the Wounds, or Punctures made in the Feet, however sensible that muscular and nervous Part may be, but from some liquid Poison injected into the Wounds, thro' these Prickles.

Of FLYING-FISH in general.

OF this Class there are no less than Five Sorts, in this Part of the *West-Indies*; tho' there hath been I believe, as yet, but one of them taken Notice of, or described by the Writers of Natural History; which, by way of Eminency and Distinction, is called the *Flying-Fish*: the rest, no less deserving of that Name, are the *Flying-Gar-Fish*, the *Sea-Bat*, the *Guinea-Men*, and the *Ballabws*.

The

The FLYING-FISH.

THIS Fish is preposterously described by most Travellers, who often take more Pleasure in setting Men a staring at Representations in themselves incredible, than in candidly and honestly relating such Matters of Fact, as come within the Sphere of their Knowledge.

Thus, when this Fish is made the surprizing Topic of Wonder, as the Generality of Mankind know no other Method of flying but with Wings, they are immediately induced to believe, that this Fish hath, according to the real Acceptation of the Word, Wings to fly with; whereas what are so called, are only Fins common in their Make with the Fins of several other Fish, differing only in Bigness, which in Proportion to the Size of this Fish, are indeed far larger than any other, the *Flying-Gar-Fish* excepted. This, that we are now describing, is not, at its utmost Growth, more than Nine Inches long, flattish on the Back, and growing broader towards the Head; the Back and Head are of a dark Blue, and whitish under the Belly; they have two large Fins, situated *post Bronchia*; these in a full-grown Fish are six Inches long; and each in Breadth at their greatest Expansion, about three Inches: When pursued by a *Dolphin*, as their Swiftness in swimming is far inferior to that Fish, to avoid him they give a Spring out of the Water, and immediately (if I may be allowed the Expression) unfurl or expand their Fins, not with a tremulous, but a steady, quick, gliding Motion; which they do with great Swiftness; but, if the Day be hot, or the Weather sultry, their Flight is short; for, as soon as the Heat of the Sun dries up the Moisture upon their Fins, which made them pliable, they must dip into the Water to receive a fresh Supply. By the best Guess that I could make, I never perceived any of them to fly above seventy or eighty Yards, tho' oftener but forty or fifty at a Time. Their Increase is prodigiously great; otherwise the whole Species must have long ago been destroyed; for they are a Prey to Men, Fish, and Birds; having no certain Tenure of Life, either in Air or Water: for, when pursued by *Dolphins*, or other voracious Fish, if, to avoid these, they seek Refuge in the Air, a Bird called the *Cobler*, among a great many others, darts with the Swiftness of an Eagle to destroy them. I cannot help observing here, that there is something very peculiar in the Make of the Wings of this Bird; for, as it seeks its Prey at a great Distance from Land, and being obliged to be long upon the Wing, often at the Distance of a hundred Miles off, to be able therefore to endure so great a Flight, the Wings are not only large in Proportion to the Body, the better to enable them to bear its Weight; but the Tip-end also of the Pinion, instead of having one, the common Make of most Birds Wings, it hath two strong Bones; by which means the Vibration of the Wings is stronger and more steady.

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The

The FLYING-GAR-FISH.

THIS is a far larger Fish than that properly called the *Flying-Fish*: it hath a long Duck-like Nose; and its Fins are so large, that it can raise itself out of the Water, but its Flight is short.

The FLYING-SEA-BAT.

THIS is of different Size, from six to fifteen Inches long; tapering from the Head to the Tail; the Mouth is close to the lowermost Part of the Head; the lower Jaws are expanded, and terminate in two long Prickles, in Length an Inch; the Eyes are large; between these the Head sinks in, or is much indented; this, as well as the Neck, is cover'd over with a hard Scarf, or thick Coat of Mail, which terminate in two long sharp-pointed Lobes in each side of the Back; the rest of the Body of the Fish, which is of a dark Grey above, and whitish under the Belly, is cover'd over with hard small Scales; from behind the Gills on the Belly-side rise two Fins; these are in Length about two thirds of the Length of the Fish; with these it flies; for, when expanded, they are from the Extremity of the one, to the Extremity of the other Fin, full as broad as the Fish is long; these Fins are narrow and strong when close to the Body; but towards their Extremities very membranaceous, thin, and of a black Colour; the Back is supplied with two small Fins; the Belly likewise under the Wings, is guarded with two Inch-long, soft pointed Horns, the whole Fish ending in a middle-sized forked Tail; these when caught with a Hook, and brought to the Surface, will fly a considerable Way, unless check'd by pulling the Line: they, as well as the two following, are very seldom to be met with.

The GUINEA-MAN.

THIS is considerably larger than the *Flying-Fish*, and hath a somewhat Duck-like Nose, and Fins so large, that he can raise himself out of the Water, and fly a small Distance, tho' not so far as the *Flying-Fish*.

The BALLAHW.

THIS is a small Fish, seldom above seven or eight Inches long; the under Part of the Nose is a great deal longer than the upper; this likewise by its large Fins, flies a small Distance; but not near so far as the *Flying-Fish*.

The INK-FISH.

THIS is of the cartilaginous Kind, and hath been by several Authors, so well, and so often described, that I have nothing to add, unless that the Curious hitherto have in their Accounts look'd upon this to be the only one that emits a black Liquid; whereas the two following are provided with such, which they spirt out to discolour the Water when in Danger of being caught. By this Means they escape the Ken of their Enemies; for, as they are not provided with defensive or offensive Weapons, this Liquid, which is as black as Ink, is as necessary for their Preservation, as Swiftness is to a *Dolphin*, or their large Fins to any of the *Flying-Fish* Kind. The blackest Liquid lies in the Tail of this Fish.

The CAT OF NINE TAILS.

THIS cartilaginous Fish, notwithstanding its Name, hath but five instead of nine Tails; which in general are not above ten Inches long, tapering to the Point; and, tho' they are but slender, yet their Strength and elastick Power is almost inconceivable. The largest of these seldom weighs above a Pound, yet it is found to be a difficult Task for a very able Man to uncling one of them from the Rocks to which they are fix'd. As cartilaginous Fishes in general have no Air Bladders, it is no Wonder that none of this Class are found in deep Waters, their Residence being chiefly among Shoals and Rocks between one and six Foot deep. They feed chiefly upon *Wिल्s*, young *Conchs*, and *Crabs*; the latter it breaks to Pieces, and the former it sucks out of their very Shells.

The SCUTTLE FISH.

THIS hath eight Tails, and often weighs near two Pounds; every Part of this Fish is full of strong elastick Muscles, especially its numerous Tails, which are often fifteen Inches long, tapering to the Point. This, as well as the *Ink-Fish*, is provided with a black Liquid, to discolour the Water, whilst it makes its Escape from its Enemy, with this small Difference, that the Liquid is lodged in the Head of this, whereas that of the *Ink-Fish* lies in its Tail.

The TRIANGULAR FISH.

THIS often grows to be near fifteen Inches long, weighing six, seven or eight Pounds; the Mouth is small, and pouched and tinged with a blackish Hue for near an Inch round; the Teeth are
many,

many, long and blunt-pointed; the Body of the whole Fish is a triangular Trunk, the Belly-part making the Base of the smallest Angle; the Skin is black, hard and rough; being raised into innumerable small Angles representing Fret-Work; the Mouth lies level with the Base of the Angle which constitutes the Belly-Part; its Eyes are large, and the upper Part of the Head much indented between them; the Back is very crooked and sharp-edged, being almost of the Consistence of a Horn; it hath two small Fins *post Bronchia* one upon the Back near the Tail, and one nearly opposite to it under the Belly; each Side of the lowest Angle being the Belly-Part is, near the Tail, guarded with a short horny Prickle; the whole Fish ending in a forked Tail.

This is delineated in Plate XXVIII.

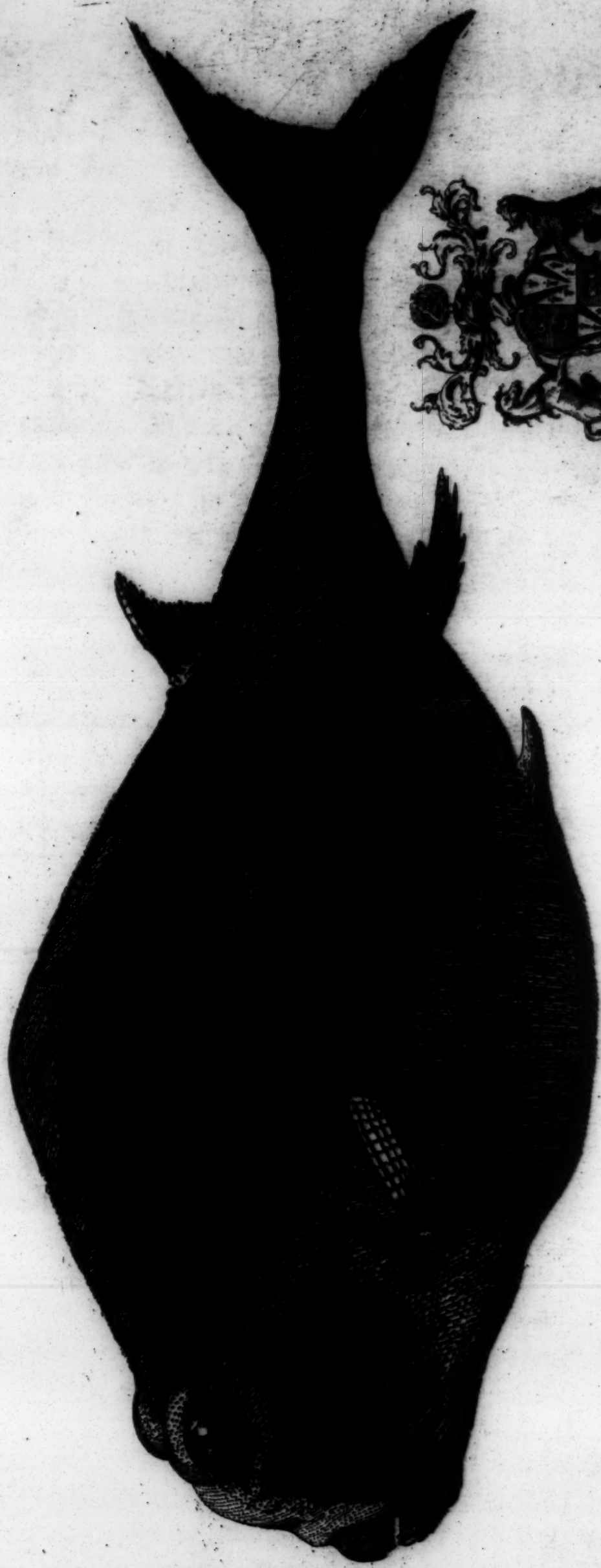
The HORNED CONEY FISH.

THIS chiefly differs from that already described, by having its Head guarded by a Pair of sharp-pointed Horns of, sometimes, near an Inch long, bending somewhat downwards. There is another remarkable Difference, which is peculiar to this Fish alone; for if eaten, especially the Liver and the Head, the Person feeding on it will, in a few Minutes after, be as drunk as if he had drank strong Liquor to Excess: For his Reason and his Limbs will fail him, until restored to both by a sound Sleep.

The SOAP FISH.

THIS is a small Fish, not above six Inches long; it is of so soapy a Nature, that when caught and strongly agitated in Water, it will cause almost as strong a Lather as an equal Quantity of the best Soap. I am of Opinion that Nature intended it this Quality (since it is incapable of every other Defence) to be as much a Means of avoiding its Enemy, as the Swiftness of swimming is to some, or their Prickles to others: But as the extraordinary Slippiness of this Fish can be no Defence against an Antagonist provided with Teeth, therefore I beg Leave to conjecture that its natural Enemy is among the cartilaginous Class of Fish (especially as it is alway found feeding near the Shore;) and none more likely of this Kind than the *Cat of Nine Tails*, and *Scuttle-Fish*; for these, by their numerous Tails which have so strong a muscular Force, grasp and hug their Prey to Death, unless by its Slippiness it can disentangle itself from them: The Strength of the above-mention'd Tails is otherwise so great, that by fixing their Heads, and, perhaps, some of their Tails to a Rock in the Bottom under Water, and the remaining round the Arm of the Person diving for them, there hath been one Instance of the Diver not being able either

to



To the R^t Hon.^{ble}
Henry Pelham Esq^r
First Lord Commis^r of y^e Treasury.
This Plate is humbly inscribed.

to pluck up the Fish clinging to the Rock, nor to extricate himself from it, and consequently perishing in the Attempt.

The OLD MAN.

THIS Fish is about eleven Inches long from the Head to the Tail, and about seven in Breadth; the Head and Mouth are small; the Teeth many and sharp; the whole Skin is black and rough: It hath two very remarkable Prickles upon the Back, not far from the Tail; these, when the Fish feeds, are couchant close to the Back; but, when annoy'd, are erect and prove offensive or defensive Weapons; but as they have no membranaceous Web to support them by its Elasticity, as most other Fish (which Nature hath endued with Prickles) have, to supply this seeming Want, this Fish can, by the Help of very strong Muscles, join'd to the Root of these Prickles, raise them in an instant upright, ready to guard himself or annoy his Enemy; and, even when the Fish is dead, if both these Prickles (the uppermost being above an Inch and a Quarter long) are lifted up into an upright Position, the largest falls into a Socket in the Back-Bone; where it will remain unmoveable, and will sooner break than bend. But as a small Touch upon the Trigger of a Gun's Lock will bring down the Cock from its full Bent, so the least Motion or Touch upon the lower Prickle will, in an instant, bring down the upper close to the Back.

The OLD WIFE.

THIS differs very little from the last described; each having their two Fins *post Bronchia*; one on the Back, and one under the Belly, of equal Size and Position, as well as the Make of their forked Tail alike: However there is this material Difference, that as the former hath its Prickles upon the Back near the Tail, this hath them near the Head, with this additional Circumstance, that, instead of two, it hath three Prickles, but equally intended to be its Safe-guard.

The JACK.

THIS Fish is about six Inches long, and near two broad from the Back to the lower Part of the Belly; the Eyes very large in Proportion to the Bigness of the Fish, and is surrounded with a yellow Iris; it hath two narrow, sharp-pointed Fins *post Bronchia*; [one streight, one under the Belly, and another upon the Back as far as the Navel;] likewise a Pair of small ones under the upper Part of the Belly: Opposite to these on the Back are likewise two small, prickly Fins; the Back from Head to Tail is blackish, and the Belly of a Silver-white: These are often caught in very great Numbers in Nets.

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They

They are in some Seasons of the Year, especially, when caught in *Christ-Church* Parish or thereabouts, very poisonous; at such Times there are generally in their Gills two small red Lumps; and when they are suspected to be poisonous, they try the Experiment upon a Duck, by giving her one of these to swallow; and if at that Season it is poisonous, the Duck dies in about two Hours.

The DOLPHIN.

TH E ridiculous Representation of this Fish by most Painters and Engravers (even after its true Shapes being so well known) is a strong Instance that vulgar Errors are but with great Difficulty got over. It is so far from having a large Head and Gills, a crooked, thorny Back, &c. as generally represented, that it is one of the straightest Fish that swims. This is delineated in Plate XXIX.

The SEA TORTOISE.

MO S T, if not all Authors, who have treated of this scarce-to-be-called amphibious Animal, have inadvertently rank'd it among the testaceous Kind; tho' it is apparently otherwise by its numerous strong Ribs and Back-Bone: The several *Lamina*, which adorn and fortify its Back, are so far from being of the Shell-Kind, that they are rather an elastick, transparent, horny Substance. A late ingenious and very useful Author hath been much imposed upon, by a pretended Description of this Animal; especially where he asserts that the Under-Shell is what alone is made Use of; and that to separate this from the upper, Fire is made underneath; and that as soon as it is heated, the Shell becomes easily separable, and so taken off with the Point of a Knife, and that with so little Prejudice, that the *Tortoise*, being afterwards permitted to go into the Sea, not only lives, but hath its Armour or Shell soon renewed. Thus that industrious and learned Gentleman, whilst laudably desirous to give Mankind as true a Description of this, as he does of almost every Thing he treats of, was much imposed upon by his Informer. This Misfortune will sometimes happen, when our Informations come from Persons, who are fond of aggrandizing, or lessening what is, or is not, agreeable to their own favourite Opinions, or groundless Imaginations. The Description of the *Tortoise* just now mentioned, is so far from being true, that the lower Shell, or what is so called, is of no Manner of Use, the upper alone being of Service; nor can this be come at till the *Tortoise* is not only dead, but all the Flesh likewise taken from the Ribs and Back; it is not till then that a Fire is made under the inside of the Upper-Shell (as I shall in Conformity to the received Opinion call it; though it is manifest it is not a Shell from its elastick Quality.) And when



To the Right Rev^d Father in God, -

Zachary. Lord Bishop of Bangor.

This PLATE is humbly inscrib'd &c.

when this Heat hath penetrated thro' the Ribs, and a crusty hard Substance which covers them; that the several foliaceous Lamina, generally about sixteen in Number, begin to exfoliate on the outside: those about the Shoulders are the thickest and best. The Back of a Tortoise is convex, and the Belly-part flat; it is cover'd all over, except near the Neck, the Anus, and under the Fins, with what we have called a fleshy Substance; the upper and the under Parts being both of them closely join'd together, by this strong Armour. The Penis of a Male Tortoise of any considerable Bigness, is full twelve Inches long; and its Testicles are as delicious as these of Lambs: in Cooting-time, the Male and Female remain in Coition, eight or nine Days, some say more; at the Expiration of which Time the Male is so reduced, that he is scarce able to swim, his Callapee (being the Belly-part) becomes from a hard horny Substance, as soft almost as a Jelly. The Penis dried and given in Powder, is looked upon by some to be a sovereign Remedy against the Gravel.

Of the three different Sorts that frequent, or are bred near these *West-India* Islands, the *Hawk's Bill* alone affords what is commonly call'd the Tortoise-shell. The two other Species, (*viz.*) the Green and the Yellow, or Mulatto *Tortoise*, have each of them such Shells, divided into as many regular Lamina, but they are so very thin as not to be fit for use. A *Tortoise* hath four Fins, with which it paddles whilst in the Water, not much different from the Strokes of Oars; and it is likewise by the Help of these that the Female glides along the Sand, when she comes on Shore to lay her Eggs. The common Method of taking them, is to pitch Nets with very large Meshes, in the Bays where they frequent, to feed upon the green, broad-leaf'd Moss that grows at different Depths in the bottom of the Sea; when taken entangled in these Nets alive, they may be brought ashore, and kept some Weeks alive without any Sustenance; for several Days after they are taken, they sigh heavily; if they die in the Net, they sink in less than an Hour's time; but if killed, which is done by cutting the Throat, (to give vent to the Blood which is always as cold as Water) the Flesh will keep not only uncorrupted, but tho' cut in Pieces, the fore Quarter and Callapee will continue to have a strong, lively, muscular, convulsive Motion, for fourteen, or even eighteen Hours; for if at that Time it is pricked with a Pin or Fork, it will move and contract itself visibly. Some Part of the Flesh cuts reddish, resembling coarse Beef; another Part as white as a Chicken; the Fat about the Fins and the Guts, is somewhat Yellowish, but the far greater Part, close to the upper and under Shell, is as green as a Leek; they are caught of different Sizes; the largest that hath been taken in this Island, within my Remembrance, did not exceed four hundred Weight. They are often ignorantly represented to have three Hearts; this Mistake arises from their having two large Auricles, one on each Side of it; the Blood in this Animal is very gross, cold and viscid; and as the Heart hath but
one

one Ventricle, its Circulation is performed after the same Manner as in a Frog; in which, not above one third passes through the Lungs; it is likewise owing to the Coldness of the Blood, its slow Motion, and thick Armour with which the *Tortoise* is surrounded, that it is at a very little Expence of Spirits by transpiration; and consequently hath less Need of a fresh Recruit: The Liver is large, and of a dark Green, and the great Gut or Colon, on the outside full of seeming Prickles; however their Points are soft and pliable, the Flesh when baked or stewed, is a most delicious and nourishing Diet; the young Ones are often caught with a Hook and Line: the properest Bait for this Purpose is a Sea-Bladder; and they are likewise sometimes drawn ashore in Nets. There is another Method of taking the larger Sort, especially the Females, by watching their coming ashore in the Night, upon the dry, sandy Bays, in the Months of *June, July, August, and September*, in which laying Seasons, after they have crawled above High-Water-Mark, they dig with their Fins (which are strong, nervous, and fleshy) a Hole of about two Feet deep, in the loose Sand, in which the Female lays sometimes an hundred or more Eggs; the outward Tegument of these is rather skinny than shelly, its Shape is round, of about an Inch and a Quarter Diameter; the inside of the Egg is yellow, and to the Taste somewhat gritty. After these Eggs are thus deposited in the Sand, the Tortoise fills up the Hole in so nice a Manner, that it will be scarce perceivable that the Sand had been disturb'd; and the Eggs, by the Heat of the Sun, will, in nine Weeks, be hatched, and the young Tortoises immediately crawl into the Sea.

Before we conclude this Description, it will not be impertinent to observe, that the Ancients knew the Value of the Tortoise-Flesh in Physick, as well as of its Shell for making the Lyre. The former appears from *Nicander*, in his Poem call'd *Alexipharma*; and *Horace* speaking of the Lyre made of the Tortoise-shell, says,

*O testudinis aureæ
Dulcem quæ strepitum Pieri temperas
O mutis quoque piscibus
Donatura cycni, si libeat, sonum.*

By the Word *piscibus*, it is evident, that the Lyre mentioned by *Horace* was made with the Shell of the Sea-Tortoise, which maketh Use of Fins to swim with as a Fish; whereas the Land-Tortoise (tho' the Shell of this hath been often us'd in *Greece* to the same Purpose) is arm'd with Claws, and is at most but barely an amphibious Animal; whereas the other, applied here by *Horace*, is almost intirely an Aquatic.

The SEA-HORSE.

AS I never saw this Animal 'till it was shrivel'd and dry'd up, I will not pretend to describe it; any farther, than that by its Trunk it seems to be a Fish which sucks in its Nourishment.

Of FRESH WATER FISH.

OF this Kind we have very few intirely peculiar to the fresh Water; that is, which breed in it; the greatest Part being generally, when very young, the Inhabitants of the Sea; when the great Current of our Land-Floods breaks thro' the Banks of our fresh Water Ponds, causing by this Means a Communication for some Time with the Sea, several Sorts of young Fish swim from the salt into the fresh Water; and from these Ponds they are caught, and carried into others several Miles up in the Country.

A CAFFUM.

THIS is a large, scaly Fish, often weighing fifteen Pounds; and measuring about three Feet in length. The Head is small in Proportion to the rest of the Body; the under Jaw is longer than the upper; its Eyes are large, incircled with a broad, golden Iris. The Back is of a dark blue, and the Sides and Belly of a shining Silver-Colour; it hath one Fin upon the Back, two *post Bronchia*, two under the Belly, and one near the Tail, which ends forked. This Fish is generally very poor whilst in the Sea, but soon grows very fat in Land-Ponds, where they are fed with the Guts of Fowls, small Fish, or upon Pond-Bugs, their most natural Food in this Situation.

The MULLET.

THESSE are of two Sorts, the Sea and the fresh Water *Mullet*; the former is of a light-grey upon the Back and Sides; the latter of an iron-grey, and the Scales very remarkably divided in regular Rows upon their Sides and Backs.

The CARMOW-MULLET.

THIS differs from the former by the Greatness of its Bulk, especially its Head, which is remarkably large and flat; these often weigh above two Pounds, being very fat and delicious Eating.

The MUD-FISH.

THERE are three Sorts of *Mud-Fish*; the first and smallest somewhat resembling *Smelts* in its Make; the second is the *Mangrove Mud-Fish*; this is thicker and larger, and hath often large Roes in it; the third and largest is the *Logger-Head-Mud-Fish*; this hath a large Head and Eyes, the former somewhat flattish; and are often a Foot long; every Species of these are justly esteemed to be very delicate Eating.

The two first Fins appear *post Bronchia*, with two smaller in a direct Line under the Gullet; it hath likewise one continued membranaceous Fin from the Navel to near the Tail, with another opposite of equal Length upon the Back. The whole Fish is covered with many small Scales, and ends with a round pointed Tail.

The STAR-FISH.

THIS is here likewise call'd the *Five-Finger'd-Fish*, and but very seldom taken.

The SHARK.

I SHALL take my Leave of the Deep and its Inhabitants with a Description, or rather cursory Observation, of the *Shark*, a Fish well known both in the Northern and Southern Seas for its ravenous Nature; preying upon most Animals that come in its Way. The young *Sharks*, upon Sight of Danger, slip in through the Mouth of of the Parent *Shark*, and, when the Danger is over, issue forth to their proper Element again.

These Creatures are sometimes seen very numerous among the Ships in *Carlisle-Bay*; especially when there are many Vessels with Slaves from *Guinea*: For some Hundreds of these poor Wretches being often crouded together in one Bottom, a great many of them die with various Diseases; and being thrown over-board, bring together so great a Multitude of these voracious Animals, that it is not safe at such Times for the fatigued Sailors to refresh themselves by bathing in the Bay. And here let me take Occasion to testify my Esteem of these daring and profitable Adventurers of the Deep, by rescuing from Oblivion a memorable Atchievement of a common Sailor in the Destruction of a *Shark*: And when the Principle which prompted him to so very unequal and hazardous a Combat, and the Intrepidity of the Action itself are considered, abstractedly from the low and mean Circumstances of the Person, it will perhaps appear to be as heroic an Instance of disinterested Friendship and personal Bravery, as any recorded in History.

About

About the latter End of Queen Anne's Wars, Captain *John Beatus* Commander of the *York Merchant*, arrived at *Barbados* from *England*. Having disembark'd the last Part of his Loading, which was Coals, the Sailors, who had been employ'd in that dirty Work, ventured into the Sea to wash themselves; there they had not been long, before a Person on Board spy'd a large *Shark* making towards them, and gave them Notice of their Danger; upon which they swam back and reach'd the Boat, all but one; him the Monster overtook almost within Reach of the Oars, and griping him by the Small of the Back, his devouring Jaws soon cut afunder, and as soon swallow'd the lower Part of his Body; the remaining Part was taken up and carried on Board, where his Comrade was. His Friendship with the deceased had been long distinguished by a reciprocal Discharge of all such endearing Offices, as imply'd an Union and Sympathy of Souls. When he saw the sever'd Trunk of his Friend, it was with an Horror and Emotion too great for Words to paint. During this affecting Scene, the insatiable *Shark* was seen traversing the bloody Surface in Search after the Remainder of his Prey; the rest of the Crew thought themselves happy in being on Board, he alone unhappy, that he was not within Reach of the Destroyer. Fired at the Sight, and vowing that he would make the Devourer disgorge, or be swallowed himself into the same Grave,—He plunges into the Deep, arm'd with a large sharp-pointed Knife. The *Shark* no sooner saw him, but he made furiously towards him,—both equally eager, the one of his Prey, the other of Revenge. The Moment the *Shark* open'd his rapacious Jaws, his Adversary dextrously diving, and grasping him with his left Hand somewhat below the upper Fins, successfully employs his Knife in his right Hand, giving him repeating Stabs in the Belly: the enraged *Shark*, after many unavailing Efforts, finding himself overmatch'd in his own Element, endeavours to disengage himself, sometimes plunging to the Bottom, then mad with Pain, rearing his uncouth Form (now stain'd with his own streaming Blood) above the foaming Waves. The Crews of the surrounding Vessels saw the unequal Combat, uncertain from which of the Combatants the Streams of Blood issued; till at length, the *Shark*, much weaken'd by the Loss of Blood, made towards the Shore, and with him his Conqueror; who, flush'd with an Assurance of Victory, pushes his Foe with redoubled Ardour, and, by the Help of an ebbing Tide, dragging him on Shore, rips up his Bowels; and unites and buries the sever'd Carcase of his Friend in one hospitable Grave.

The Story, I confess, is of so extraordinary a Nature, that I would not have dared to give it my Reader, had I not been authoris'd thereto by the Testimony of a very credible (1) Gentleman, who is ready to confirm by Oath, the Truth of what is here related. This Action, intrepid as it is, will unquestionably fall under the Censure of those, who are accustomed

(1) Lieut. Col. *Hillary Rowe*, of *St. Lucy's Parish*, who was not far from the Place when this happened.

customed to judge by the Rules of moral or political Fitness; it not being prudent in any Man to expose himself to Danger, from which he must owe his Escape as much to Chance as Valour, nor consistent with the Value which ought to be set on the great Gift of Life, to risque it upon small and inadequate Occasions; the Exploit therefore had been more truly heroic, had it been performed for the Preservation of his Friend's Life, rather than the Recovery of his Body. But such Reflections are not the Sentiments of Sailors, a Class of Men to whom Courage is a Virtue, however madly or unseasonably exerted.

And yet if such an Action had been recorded of *Scipio* or *Alexander* in the Defence of *Lælius* or *Hephestion*, whether it would not have been celebrated by their Admirers, among the most shining and magnanimous Atchievements of those renowned Heroes and Friends.

F I N I S.



The Story, I confess, is of so extraordinary a Nature, that I could not have dared to give it my Reader, had I not been authorized thereto by the Testimony of a very credible (1) Gentleman, who is ready to confirm by Oath the Truth of what is here related. This Action, intrepid as it is, will unquestionably fall under the Censure of those who are accustomed

(1) Lieut. Col. Mordaunt, of St. Luke's Parish, who was not far from the Place when the happened.



EXPLANATORY

NOTES

OF ALL

Botanical and Technical Terms made use
of in the foregoing WORK.

A.

A *CINI*, are small Grains growing in Bunches, after the manner of Elder-tree Berries in *England*, and yellow Hercules Berries in this Island.

Apices or *Summits*, are those Bodies which contain the *Farina fecundans*. They generally hang upon slender Threads called Chives.

Aromatic Plants, are those whose Leaves or Branches have an odorous Scent, as Rosemary, Lavender, &c.

B.

B *Acciferous* Trees, are those which bear Berries. A *Berry* is a fleshy Fruit inclosing several Seeds.

Bulbous-rooted Plants, are of two Sorts, *viz.* tunicated or coated Roots, which consist of several Coats involving each other, as the Onion, Tulip, &c. The other squammose or scaly, which consists of several Scales lying over each other, as the Lily, &c.

Explanatory NOTES, &c.

C.

C*apsula*, is the dry Husk or Vessel of Plants, in which the Seeds are contained.

Calyx, is the Flower-cup, or those green Leaves which cover and embrace the Flower. These in some Plants afterward inclose the Seeds. Those Plants whose Flowers have no Petals so inclosed, are termed *apetalous*. This is by some called the Empalement of the Flower.

Catkin or *Iulus*, is an Aggregate of Summits, collected into a long Body in form of a Rope. These are the Male Flowers of Trees.

Chives, are those slender Bodies which surround the *Ovarium* in the Centre of Flowers, and support the Summits.

Clavicle or *Tendril* (*Capreolus*) is a Part of a Stalk curling and laying hold on any adjacent Body. As in the Vine, Briony, &c.

Clavicles, *Claspers*, or *Tendrils*, are the young Shoots of creeping scandent Plants; it is by these that they take hold of the neighbouring Trees or Rocks; and sometimes, if thus supported, they grow to a greater Height: Of this kind are the Claspers of the Grape, Vine, and most others of that Tribe.

Coagulation, is the condensing or thickening the Juices of any Tree or Plant, by the Heat of the Sun.

Coronated or umbilicated Fruits, are those which have their *Calyx* or Empalement of the Flower growing on their Top, as the Medlar, Pear, Apple, &c.

Corrugated, or wrinkled, as the Leaves of Baum, Mint, &c.

Crenated, or notch'd Leaves, are those, whose Edges are cut into several obtuse Angles.

Corymbiferous Plants, are such as have a compound or discous Flower; the Seeds having no Down sticking to them.

D.

D*entated* Leaves, are such as have their Edges notch'd, somewhat like the Teeth of a Saw.

Digitated or finger'd Leaves, are those which are divided into several Parts, which are connected together at the Tail, so as in some measure to resemble a Hand, as in the Cinquefoil, Lupine, &c.

E.

E*chinated* Pods, or Leaves, are those that are set round with Prickles, such as the Pods of Horse-nickers in this Island, and Holly-leaves in England.

F. *Fistular*

Explanatory NOTES, &c.

F.

F*istular* Flowers, are such as are compounded of many long hollow small Flowers like Pipes, all divided into many Jags at the End.

Falcated Pods, are those which bend in like an Hook or Semicircle.

Foliola, are those small Leaves which grow along the Mid-rib of the Leaf, in compound Leaves.

G.

G*laucous* Leaves or Stalks, are of a whitish-green Colour, somewhat of a bluish Cast; such are the Leaves of the *French Sorrel* in *England*, and of the blue *Edda* in these Parts.

Galeated or hooded Flowers, are such, whose upper Part resembles a kind of Helmet or Hood, as in the Flower of Sage.

Granated, or that Fruit which is compos'd of many Grains or Kernels.

H.

H*erbaceous* Leaves, are such long small Leaves as come nearest in Shape and Colour to that of common Grass; such are the Leaves of Reeds.

I.

I*ULI*, are Catkins, being Bunches of small dusty Flowers growing upon several Trees and Shrubs, such as *Hassels* and *Walnuts*.

Indented Leaves, are such as are slightly indented on their Edges.

L.

L*abiated* Flowers, are difform monopetalous Flowers, divided usually into two Lips, as in Sage and Rosemary.

Lacinated Leaves, are those which are naturally jagg'd or notch'd to the Mid-rib by Vermin.

Ligulae, or small Strings.

M. Mem.

Explanatory NOTES, &c.

M.

M*Embranaceous*, when taken in a Botanical Sense, is generally applied to the several thin Filaments, which distinguish some partitional Cells from each other, as in the Pomegranate Fruit.

Monopetalous Flowers, are those which have but one Leaf, or Petal, which, tho' it is seemingly cut into Four or Five small Petals, or Flower leaves, yet they are all one Piece.

Muricated, prickly Leaves.

N.

N*ervous Leaves*, are those which consist of many Ribs or Fibres.

Nuciferous Trees, or Shrubs, are such which bear Nuts.

O.

O*RÆ*, the Extremities of several Kinds of Flowers.

P.

P*Anicle*, is a Stalk diffused into several Pedicles, sustaining the Flowers or Fruits, as in Oats, &c.

Papilionaceous Flowers, are those which resemble a Butterfly with the Wings extended, as in Peas and Beans in *England*, as well as in the Pigeon-Pea-Tree Blossoms in this Island.

Pappose Seeds, are such as have a downy Substance sitting on the Top of each Seed, as the Dandelion, Scozronera, &c.

Parasitical Shrubs or Plants, are those which derive their Nourishment from other Plants; thus the Mistletoe from the Oak in *England*, and from the Orange Tree here.

Pennated or Winged Leaves, are such as are compounded of many small Leaves or Lobes, placed along the middle Rib, either alternately, or by Pairs. When the middle Rib is terminated by an odd Lobe, it is said to be unequally *pennated*; and equally *pennated*, when it is not terminated by an odd Lobe.

Petals, are the fine-colour'd Leaves of the Flowers, to distinguish them from the Leaves of the Plant.

Pedicles, or the Foot-stalks of any Leaf, Fruit, or Flower.

Pen-

Explanatory Notes, &c.

Pendulous Flowers, are those which hang downwards; such as the Aloe Flower.

Pistil, is that Body which arises in the Centre of Flowers, and generally supports the Ovary.

Pinnæ. The Number of these are reckoned from the Number of the several Pairs of winged Leaves upon a Branch.

Pomiferous Trees or Shrubs, are those which bear Apples, or some Fruit of the Apple-kind, such as Oranges and Lemons.

Pruniferous Trees, &c. are those which bear Plums.

R.

Reticulated Bark or Substance, is that which is composed of a strong, Net-like Structure: Such is the most substantial Part of the Body of a Popais-tree.

Rugose. This is a Term chiefly made use of with regard to the Bark of such Trees as are wrinkled, or furrowed.

S.

Setae, are those stiff small Hairs which often cover the Leaves, or the Stalks, of Plants; such as Nettles, and the Foot-stalks of Belly-achs.

Scandent Plants, are those whose Stalks are too weak to support them upright; therefore by their Claspers or Tendrils they fasten unto, or climb up, the neighbouring Trees; by which means they often grow to a great Height; such is the Ivy in England, and all manner of wild Wyths in this Island.

Serrated, or sawed Leaves, are such as have acute Notches in their Edges, resembling the Teeth of a Saw.

Stellated Plants, are those whose Leaves grow round the Stalks at certain Intervals in the Form of a Star with Beams; as Crosswort in England, and Star-grass in this Island.

Siliquose. All Trees, Shrubs, and Plants which bear Pods, are of this Kind.

Spatha, is that Part of a Plant which incloses the Flowers of the Palms, &c.

Stamina (are the same as Chives) are those fine Threads, Capillaments, or Hairs, growing out of the Bottom of the Flower, as from Tulips in England, and from the Flowers of the Flower-fence in this Island.

These *Stamina* are generally tip'd with *Apices*, or small Knobs, at their Points.

M m m m

Squammatim,

Explanatory NOTES, &c.

Squammatim, in Scales.

Stamineous Flowers, are those imperfect ones which want the fine coloured Leaves called *Petals*, and consist only of the *Stylus* and *Stamina*; such as the Flowers of Ackatee.

T*hrum*, are those small setaceous *Villi*, or stiff Hairs, rising and forming an equal, even, plushy Bed, in the broad Bottom of a Flower, as in the Marygold and the Sunflower.

Transverse Ribs, are those smaller Ribs or Veins, which cross the middle Spine, or Ribs which run from the Stalk to the Extremity of the Leaf.

Tubular Shanks or *Stalks*, are those that are hollow like a Pipe; such as Popais-shanks in this Island, and the Stalks of Hemlock in England.

Tetrapetalous Flowers, are those that consist but of four single-coloured Leaves called *Petals*, set round the Stylus to compose the Flower.

V.

V*erticillate Plants*, are such as have their Flowers intermix'd with small Leaves, growing in a Kind of Whorles about the Joints of the Stalk, as Peny-royal and Harehound in England, and the small white Sage in this Island.

Vulnerary. All Plants that have a healing Quality in their Juices, or otherwise, are called *Vulnerary Plants*.

U.

U*mbelliferous*, signifies a Plant that bears many Flowers dispos'd, somewhat like an Umbrella, growing upon many Footstalks, like Fennel Angelica, in England.

Umbel, is the Extremity of the Stalk and Branches divided into several Pedicles, or Rays, beginning from the same Point, and opening in such a manner, as to form a kind of inverted Cone, as in a Parsnep. When these Pedicles, which surround the Stalks, are again divided

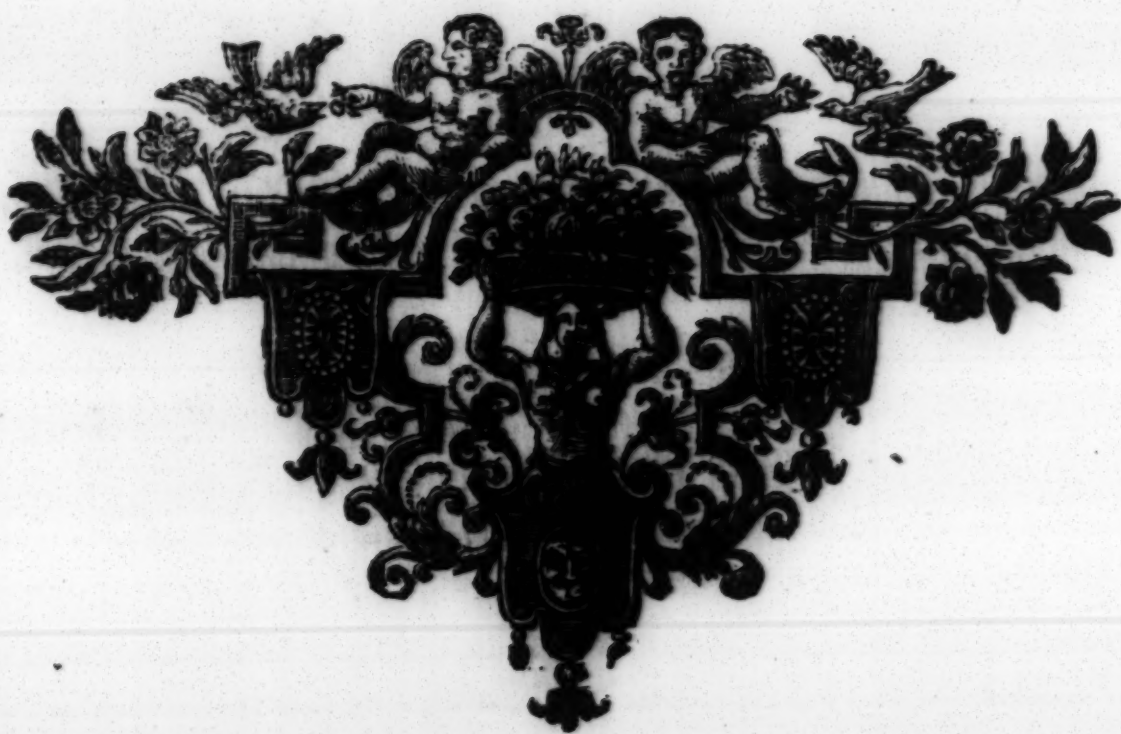
Explanatory NOTES, &c.

divided into others of the same Form, upon which the Flowers are disposed, the first are called Rays, and the second Pedicles.

W.

W*inged Leaves*, are those that are set opposite to one another on the Branches; such are the Walnut-tree-leaves in *England*, and the Leaves of the yellow Sauders, with a great many others, in this Island.

N. B. *I owe most of the above Explanatory Notes to the accurate Mr. Miller of Chelsea.*



Explanatory Notes, &c.

divided into two parts of the same form, upon which the flowers are disposed, and which are called Rays, and the second Petioles.

W.

Winged Leaves are those that are set opposite to one another on the branches; such are the Walnut-leaves in Egypt, and the leaves of the yellow Salubert, with a great many others, in this Island.

N. B. I have made of the above Explanatory Notes to the account Mr. Miller of Oxford.



A D D E N D A.

To the Account of the MUREX, ending in Page 275. add,

THE several Authors who have treated of the Shell-fish which produces the Purple, have, in describing it, promiscuously made use of the Words *Conchylium*, *Purpura*, *Murex*, and *Ostrum*: All these are here convertible Terms, or figuratively applied to express either the Shell or Shell-fish, the Tincture it emits, or the Purple or Crimson itself. The *Greeks* call'd all Shells *Conchs*; and that which afforded the Purple was, by way of Eminence, called the *Conch*. From hence *Plautus* calls purple Tapestry *conchyliata tapetia*. *Juvenal* and *Martial* have follow'd the *Greeks* in calling this the *Conch*.

Horum ego non fugiam conchyliis.

JUVEN. III. 81.

Ebria Sidoniae cum sint de sanguine conchæ.

MART.

There are two Sorts of Shells that are so term'd: The most generally so called, is that described and delineated by *Rondeletius* and others; this is studded with several long Prickles, some of them chanell'd, and open on one Side. Thro' these Fissures it is said that the Tongue of the *Murex* darts into the other lesser Shell-fish, which these Prickles had before perforated, and thus feed upon them. The other is of the *Buccinum* Kind we have already described and delineated.

The learned *Fabius Columna*, as well as many antient Authors say, that this is the peculiar Characteristic of the true *Tyrian Purple*, and that the other *Conch*, or *Murex*, emits a Liquid which dyes a fine Violet Colour. That there were two Sorts of what is commonly called the Purple, is evident from a Passage in *Pliny* (1), where a Person is represented saying, *Me juvene violacea purpura vigeat, cujus libra* (2) *denariis centum venibat, nec multo post rubra Tarentina.*
By

(1) *Lib. 9. Cap. 29.*

(2) *Denarius* was a Roman Penny, very near the Weight of the *Attic Drachm*, in our Money of the Value of Eight-pence Halfpenny Farthing; seven of them being made out of an Ounce Troy Weight in the Time of *Tiberius*. And we read of no higher Value either before or after that Time; which also continued legal Weight in the Time of *Vespasian*. After this they weigh'd less; eight of them being made out of an Ounce, which reduced them to Seven-pence Halfpenny of our Money. For whereas their *Libra* before contained but eighty-four, it now contained ninety-six of them. In the lower Empire they scarce weigh'd half so much in pure Silver. Tho' this was the Price of this Kind of Purple: Yet the so-much valuable *Tyrian Scarlet* was often sold for One thousand Roman *Denarii* a Pound; so that it was ten times as dear as the common Purple.

ADDENDA.

By the Help of this Distinction between these two Colours, we shall be able to throw Light upon several Passages in the Classic Authors, otherwise obscure; among these that of *Horace*:

- - - - *Te bis Afro*
Murice tinctæ
Vestiunt lanæ.

Lib. II. Od. 16.

The *bis tinctæ* hath been generally understood by Critics of Cloth double-dy'd in the same Materials, to give it a deeper Dye; but may not we be of Opinion, that this so much valued *Tyrian* Purple receiv'd first the Tincture of the Violet Colour mentioned as above? This being afterwards dyed in the deep *Tyrian* Red, the second Dying added a Redness to it, which could not have been done by being double-dyed in the Violet Colour.

That there was one Kind of the Purple of the Antients of a deep Red, like Blood, is evident from that beautiful Allusion of *Homer*:

τον δε
Ελαβε πορφυριος θανατος κ' μοιρα κραταιη.

From the above-mentioned Mixture of the Violet Colour, and the deep *Tyrian* Red, arose the most beautiful, and so valuable flaming Purple, varying in Degrees, as the Violet, or the *Tyrian* Red, prevail'd. These two Colours seem to be hinted at by *Catullus*, who, speaking of the Marriage of *Peleus* and *Thetis*, says,

Tincta tegit roseo conchyliis purpura fuco.

And that the latter of these was more valuable, appears from its far greater Price, as well as from its being more frequently describ'd as the most distinguishing Mark of Royalty. Thus *Virgil*,

Et princeps Tyrio vestem prætexuit ostro.

And *Claudian*, speaking of the Marriage of *Honorius*, says,

Amplexu caleat purpura regio
Et vestes Tyrio sanguine fulgidas
Alter virgineus nobilitet cruor.

Lib. 5. V. 114.

Many likewise are the Instances in Classic Authors, to prove that it is the peculiar Property of the *Tyrian Murex* to dye red, or of a crimson Colour.

Ovid

ADDENDA.

Ovid says,

Nec quæ de Tyrio murice lana rubet.

And Virgil,

Tyrionque ardebat murice læna.

Æn. IV. 262.

The same Author elsewhere calls it the Purple of *Sarra* †.

Ut gemma bibat, et Sarrano dormiat ostro.

From hence *Milton* takes occasion to describe the Dress of the Arch-angel descending to the Earth.

----- O'er his lucid Arms
A military Vest of Purple flow'd,
Livelier than Melibean, or the Grain
Of *Sarra*, worn by Kings and Heroes old.

Tarentum seems to be one of those Places for preparing the Purple Dye, especially, as *Pliny* observes, in the Time of *Augustus*; and the Ruins of the Buildings, as well as Heaps of broken Shells, remain'd there for several Ages after. As these Shells producing the Purple were found in the *Mediterranean*, this will perhaps help us to understand the Force of that Line of *Virgil*,

In mare purpureum violentior influit amnis.

Georg. IV. v. 373.

Virgil likewise alludes to this, when he says,

*Lumenque juventæ
Purpureum, & lætos oculis afflârat honores.*

The same Poet, describing the Funeral of *Pallas*, gives us to understand that this Colour was of great Esteem:

*Tunc geminas vestes auroque ostroque rigentes
Extulit Æneas: quas illi læta laborum
Ipsa suis quondam manibus Sidonia Dido
Fecerat, & tenui telas discreverat auro.*

Æn. XI. 72.

In

† *Sar* was the Name of a Phœnician City, afterwards called *Tyre*.

ADDENDA.

In After-ages it became the distinguishing Mark of Royalty, and made no small Part of the Treasures of the Eastern Monarchs. For when *Alexander* the Great had defeated *Darius*, and taken the City of *Susa*, he found among other Spoils to the Value of five thousand Talents of *Hermonic Purple*, that had been laid up in Store for near two hundred Years. In Process of Time it became (as we have said) the Mark of Grandeur and Dignity : Hence to put on the Purple, was to assume the Government : And sometimes of Pride ; thus the rich Man is represented in Scripture to be cloathed in fine Linen, and Purple. And as the *Romans* had a Law forbidding all private Persons the Use of purple Garments, so likewise none but Emperors, or supreme Magistrates, were allow'd the Use of Purple, instead of Ink : Hence many of the Royal Grants and Laws were sign'd with Purple ; and *Pamphilus*, *Apelles's* Master, made use of this Liquid in painting or enamelling upon Ivory, which was done by heating the Ivory to a great Degree, and then pouring into the engraved Lines this liquid Purple. Hence that Epigram of *Martial*,

*Encaustes Phaeton tabula tibi pictus in hac est.
Quid tibi vis, Dipylon qui Phaetonta facis ?*

This Colour was so admir'd by the Antients, that the Poets added the Epithet *Purple* to every thing that was rare, bright, or valuable. Hence, by a surprising poetic Licence, *Horace*, speaking of a Swan, says that he was

Purpureis ales oloribus.

PAGE 195, *Line* 18, *add*, The Flowers are succeeded by Snuff-coloured Pods, these are deeply channell'd, and contain several thin shelled Nuts.



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F I N I S.

1-11 D. H. N.

W

The Reader is desired in particular to excuse and correct the following Mistakes and Omissions of the Engravers and Printers, which were too late perceived to be otherwise altered.

In Plate 12. for Most Reverend read Right Reverend.

The Bay-Berry Tree delineated in Plate 10. marked thus * is to be Paged 145. Plate 24. for Page 293. read 280. Plate 11. for Page 352. read Page 152. The Sea-Eggs mentioned in Page 279. and 280. and said to be in Plate 26. Fig. 1. Fig. 2. as well as the Plate Fish, or the flat Sea-Egg mentioned in Page 280. and 281. and said to be in Plate 28. Fig. 3. Fig. 4. are to be found in Plate 24. Page 280. Page 280. line 20. dele not after were. Page 9. line 40. for auctiores read acutiores. In the Addenda, Page 2. line 27. for ελαζε, read ελλαζε. for πορρυε, read πορρυε. The Bookbinder is desired to have a greater regard to the Page than to the Number of the Plate. Page 40. line 20. dele this Time after Infection.

✎ *The Reader is desired likewise to consult the Errata at the End of the List of Subscribers.*

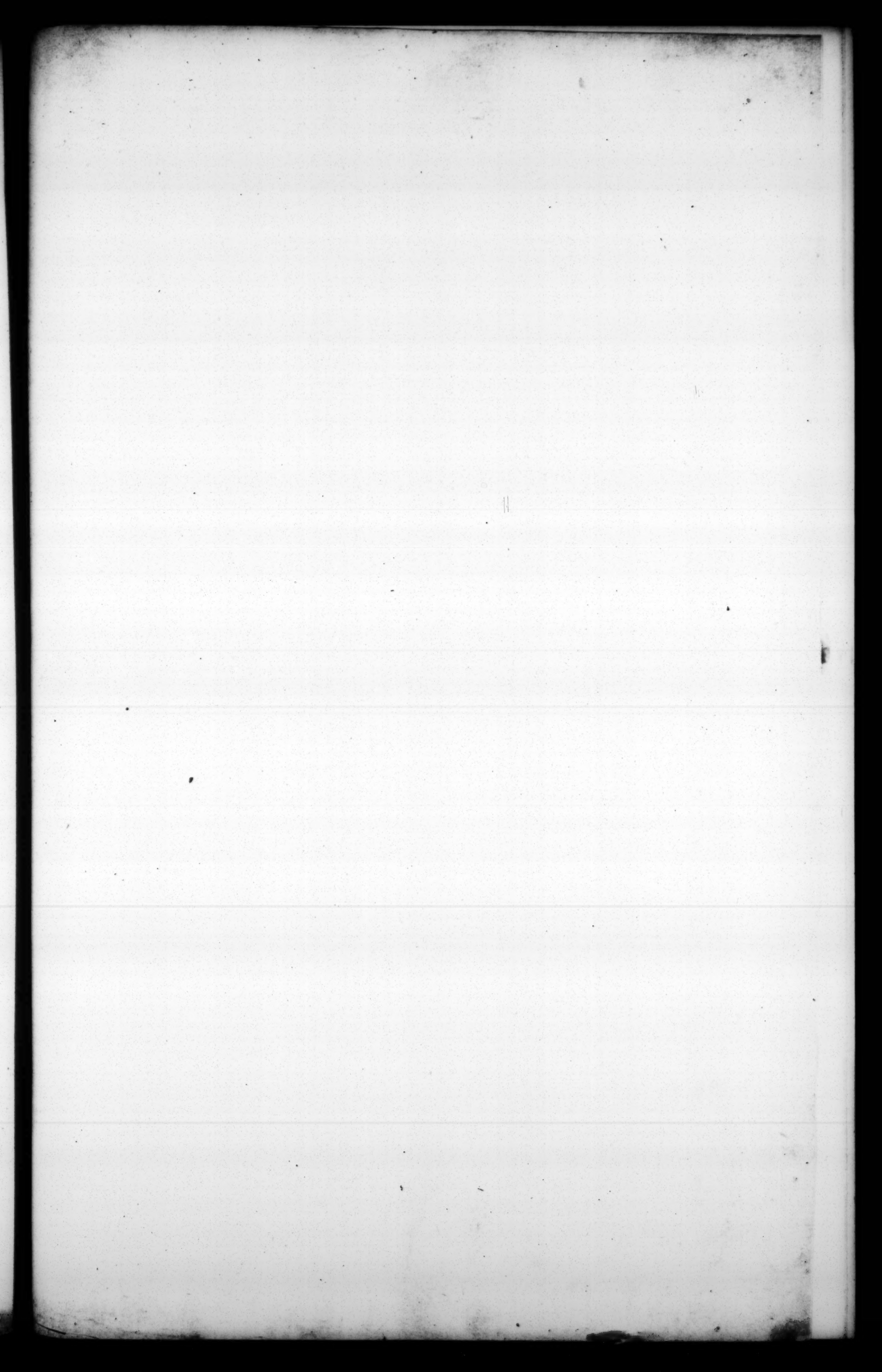
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